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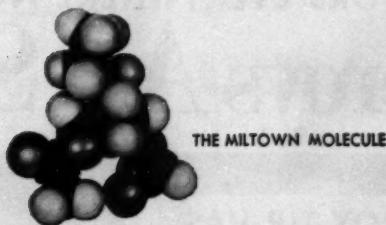
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References: 1. Boland, E. W., *J.A.M.A.*, 160:613, February 25, 1956. 2. Marzolis, H. M., et al., *J.A.M.A.*, 158:454, June 11, 1955. 3. Bollet, A. J., et al., *J.A.M.A.*, 158:459, June 11, 1955.

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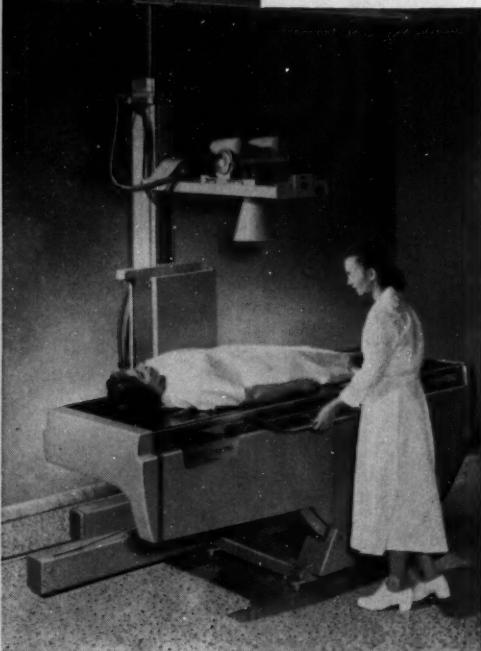
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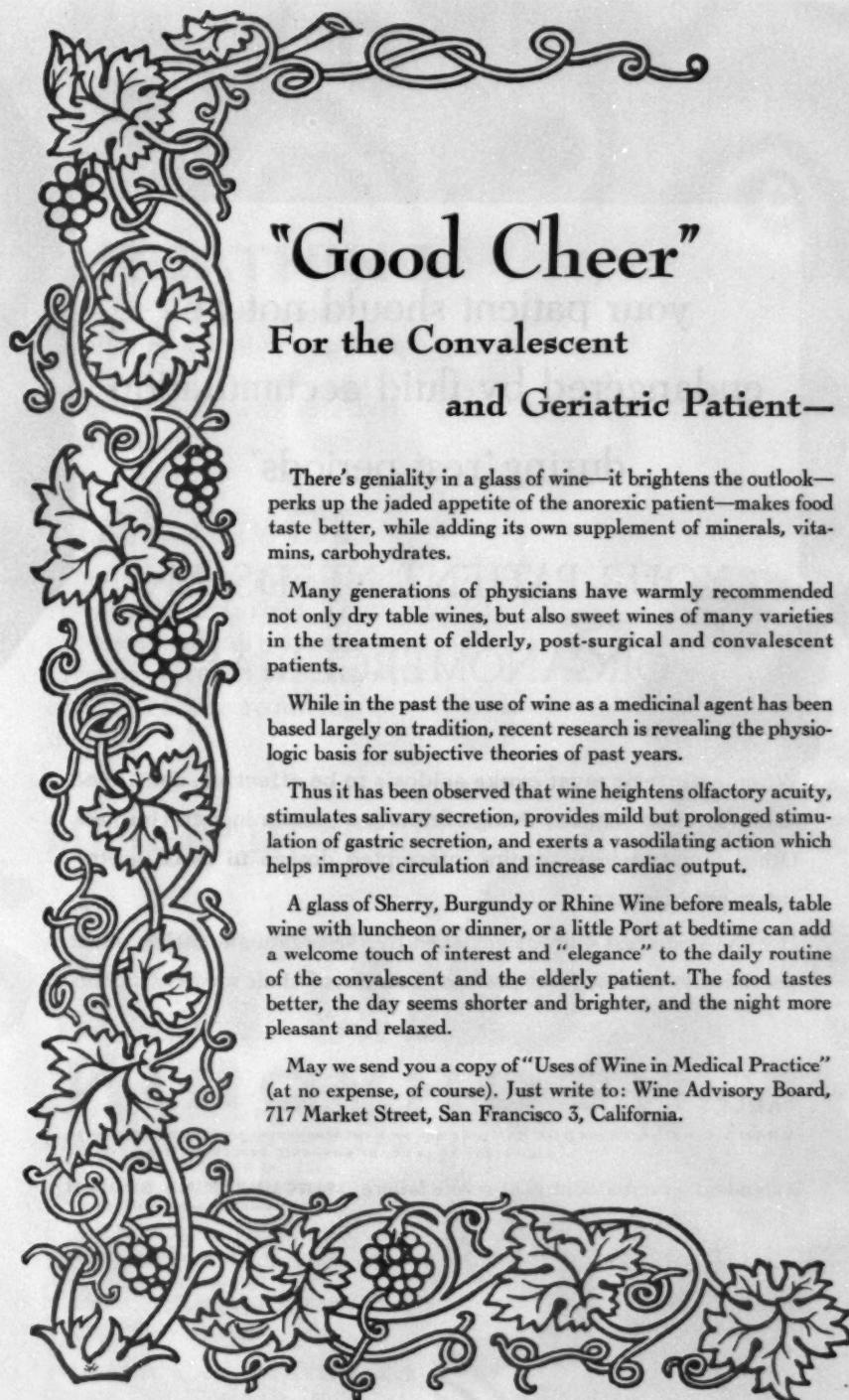
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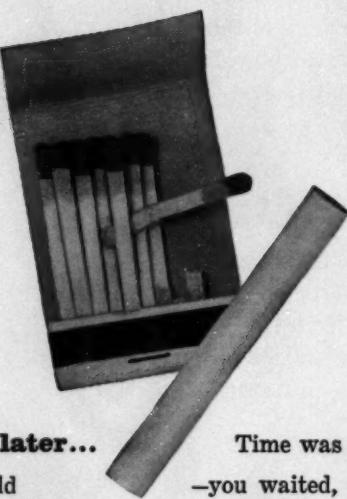
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1. Johnston, T. G., and Cazort, A. G.: J. Allergy 27:90, 1956.
2. Schwartz, E.: New York J. Med. 56:570, 1956.
3. Schiller, I. W., et al.: J. Allergy 27:96, 1956.

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1. Cronheim, G., and Toeke, I. M.: Comparison of Sedative Properties of Single Alkaloids of *Rauwolfia* and Their Mixtures, Meet. Am. Soc. Pharmacol. & Exper. Therap., Iowa City, Iowa, Sept. 5, 1955.

2. Moyer, J. H.; Dennis, E., and Ford, R.: Drug Therapy (*Rauwolfia*) of Hypertension. II. A Comparative Study of Different Extracts of *Rauwolfia* When Each Is Used Alone (Orally) for Therapy of Ambulatory Patients with Hypertension, A.M.A. Arch. Int. Med. 96:530 (Oct.) 1955.

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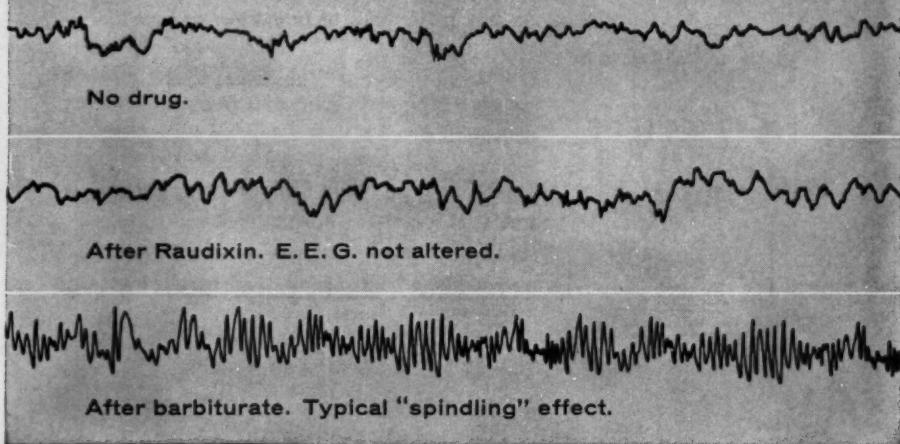
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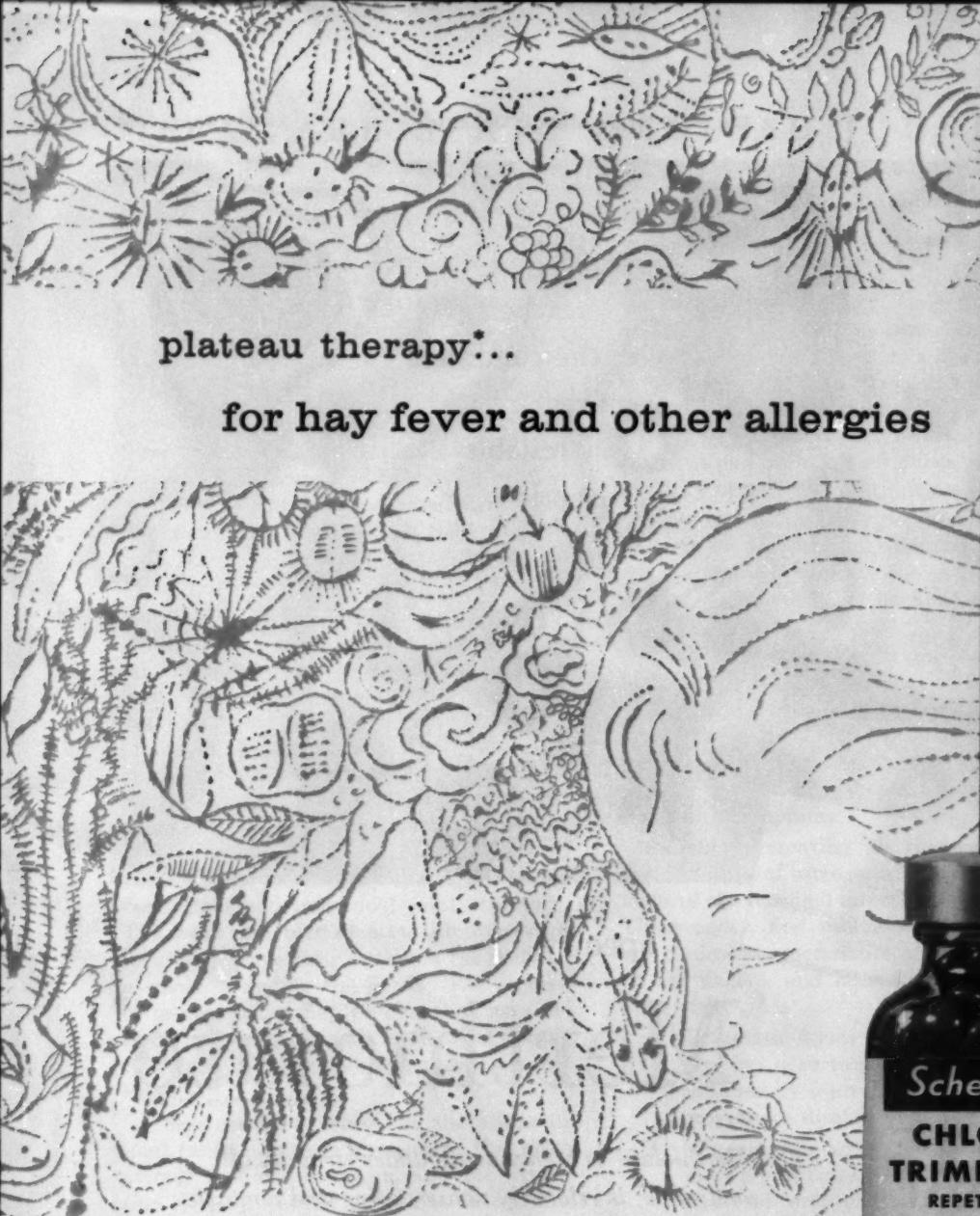
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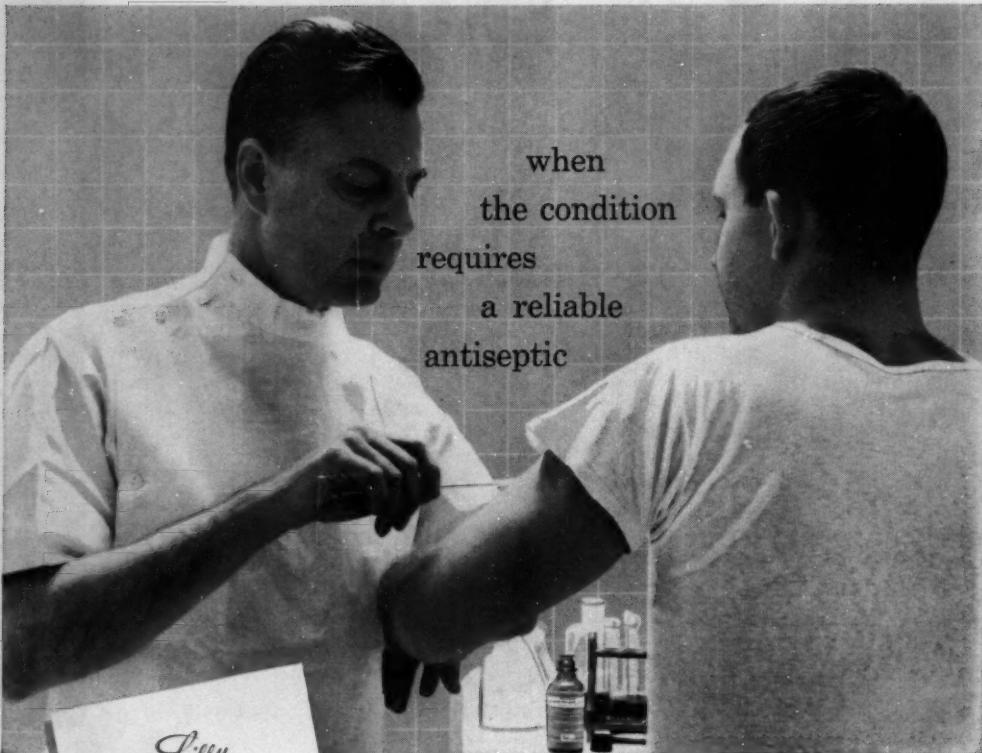
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DIAGNOSIS AND TREATMENT OF OSTEOARTHRITIS

PETER J. WARTER, M.D.,*
Trenton, N.J.

Osteoarthritis is a perplexing and challenging medical problem. Patients with this illness, seeking medical advice because of pain and stiffness associated with joint disturbances, appear to be healthy individuals. The number of apparently robust and healthy people affected permits us to conjecture that ill health is not a precipitating factor.

Osteoarthritis is described by many as being essentially a disease of middle and old age. We have found the disease in many younger people, particularly those engaged in strenuous outdoor occupations and contact sports. We cannot argue with the aging process, which increases the incidence of osteoarthritis by impairing the general body tissues, particularly the cardio-vascular system and individual joint structure. The wear and tear of accumulating years invariably leave their stamp on the body as a whole, including the joints. The process of osteoarthritis may be described as a vicious cycle of changing mechanical conditions and attempts at structural adaptations.

There are times when the alterations in joint functions are so pronounced that they attract first consideration, and the attention of the physician, as well as that of the patient, is concentrated on the joint. Thus, the joint distracts attention from possible vital and important changes in the body which might yield vital clues.

Characteristics of Osteoarthritis:

Clinically, osteoarthritis is more apt to be monoarticular than polyarticular in character. The appearance of the hypertrophic joint gives little indication of its symptomatic state. Pain apparently bears no relation to the degree of arthritis visible to

the physician or seen on X-ray films. The articular changes in the older patients may be extensive; still, they may complain of very little pain. On the other hand, in younger adults, pain frequently exceeds the physical signs apparent clinically. The most frequent and profound symptom, in a great majority of patients, is stiffness.

Since rheumatoid disease is also frequently seen by general practitioners, it might not be amiss to present the general diagnostic characteristics of both osteoarthritis and rheumatoid arthritis.

We distinguish between the two major forms of arthritis by referring to the one as osteoarthritis because invariably only the joints are involved, and it is a local disease; the other we refer to as rheumatoid disease, because we consider it a systemic disease with joint symptoms.

Patients presenting all classical pathologic features of osteoarthritis have involvement of the terminal interphalangeal joints. These nodes, first described by Heberden, are clinical characteristics of osteoarthritis of the fingers, and according to Stecher,¹ are of two types:

1. Traumatic nodes — more common in men but occurring also in women; occasioned by injury and not leading to progressive disability.
2. Idiopathic nodes — most common in women over sixty, slowly increasing in size and eventually affecting many fingers.

The origin of these nodes is quite mysterious. There may be a connection between the occurrence of these nodes and hereditary influences. In the course of history surveys, patients will often offer the information that their fathers or mothers had the same kind of "knobby fingers."

The knee, because it is used more often in weight bearing through a wider range of motion than any other joint, is extremely susceptible to osteoarthritic changes. Obes-

* Chief, Arthritis Clinic, Hahnemann Medical College and Hospital, Philadelphia, Pennsylvania.

Assistant Professor of Medicine, Hahnemann Medical College, Philadelphia, Pennsylvania.

TABLE I

| Joint involvement | Osteoarthritis Monoarticular - particularly joints exposed to constant use and weight bearing. | Rheumatoid Disease Polyarticular - involvement usually symmetrical and peripheral |
|------------------------|---|--|
| Heberden's Nodes | Frequently present. | Absent. |
| Swelling | Not usual. | Fusiform. |
| Effusion | Not usual - if occurs is of short duration | Very common and persistent. |
| Muscle Involvement | Spasm - no atrophy. | Atrophy frequent. |
| Laboratory Studies: | | |
| R.B.C. | Usually normal | Anemia |
| W.B.C. | Normal | Leukocytosis |
| Sedimentation rate | Normal | Accelerated |
| Clinical Observations: | | |
| General Health | Apparently good | Systemic involvement |
| Weight | Obesity present | Loss in weight common |
| Tension - fatigue | Present to some degree | Pronounced |
| Infection | Not related to arthritis | Infection an apparent important etiologic factor |

ity adds an extra load, which increases degenerative changes. Sprained and torn ligaments, which are daily occurrences in athletes, definitely contribute to the development of definite articular changes. The distinguishing clinical characteristic of osteoarthritis of the knee is 'crepitus', which is found almost invariably. This crepitus is often gritty, crackling and may be audible for quite a distance; however, the degree of crepitus is not necessarily a measure of discomfort. A knee with marked crepitus has frequently been found to be quite comfortable.

Osteoarthritis of the hip might claim the distinction of being the most disabling form of osteoarthritis occurring in man. Some authorities claim the incidence of this disease is limited more or less to senile patients, which we believe to be inaccurate. We have frequently observed this condition in patients between fifty and sixty years of age, and evidences of both hips being involved.

Degenerative changes of the hip are also observed in Marie-Strümpell's disease (rheumatoid spondylitis) in the second and third decades of life. Such changes are common complications in Still's disease, and proceed to greater disability.

Pain is not necessarily a diagnostic feature. Pain may be the result of twisting or distention of the joint capsule and of muscles fatigued by the effort of guarding the

joint against motion. Stiffness is invariably present, and overactivity often increases this effect.

Diagnosis is aided by the patient's gait and the positions he assumes while standing at rest.

In some quarters the spine is considered the most vulnerable site of osteoarthritis. There is some question attached to this concept, since there may be some confusion between osteoarthritis and spondylosis deformans. Time and space do not permit us to discuss this problem here in detail.

In both forms, the sites most frequently affected are the lower cervical area and the lumbar region. Osteoarthritis of the upper dorsal spine is a source of considerable mild discomfort about the shoulders. Pain may radiate so as to be suggestive of angina — the differentiation being that the pain is bilateral and is located superficially in Osteoarthritis. Osteoarthritis of the lower dorsal spine may lead one to suspect gall bladder disease or renal colic. The necessity of careful examination is imperative to rule out these conditions. The lumbar spine with evidence of osteoarthritis is a frequent source of sciatic pains and complaints. Of course, we must not overlook osteoarthritis of the sacroiliac spine, in which the X-ray changes are unilateral. Pain in this source of arthritis is lancinating, aggravated by the merest motion, and is distributed throughout the area covered by the sciatic nerve.

Although osteoarthritic patients may not complain of anything but their joint symptoms, giving the impression that they are otherwise well, a detailed history survey and a diligent examination will frequently reveal some disease process elsewhere in the body. Because of the diversity of factors involved in osteoarthritis, and because we believe therapeutic measures can be more intelligently outlined, we have followed a course of classifying patients into categories suggestively indicative of the primary cause of the osteoarthritis.

Primary Causes of Osteoarthritis:

1. Traumatic osteoarthritis: The conscious starting point in most patients is frequently self-inflicted traumata, which are followed to a greater or lesser degree by clinical signs and symptoms of inflammation. Changes take place in the joints as a result of repeated minor traumatic insults, and in many patients these changes may be observed without any symptoms.

Exposure to occupational hazards may result in subsequent symptoms of osteoarthritis. One of the occupations with multiple hazards which might be considered an "assembly line" for osteoarthritis is "contact sports", such as baseball, football, basketball, soccer, etc. We have seen many cases of acute traumatic arthritis which later developed into chronic joint disability.

2. Dietary Influences: Faulty dietary habits can be responsible for symptoms in the articular tissues of many osteoarthritic patients. Diets productive of obesity, which adds to the load the joints must bear, may be attended with serious consequences. Tuttle² has suggested that a disturbance in the phosphorylation mechanisms holds the key to factors at fault — as evidenced by increased blood pyruvic acid levels. The pyruvic acid in excess is a muscle fatigue producing toxin, and is probably responsible for the general fatigue associated with the arthritic syndrome. A review of dietary histories in a number of our osteoarthritis patients revealed that many of them indulged in high carbohydrate foods and the meals were in many instances deficient in vitamins, particularly ascorbic acid.

3. *Fatigue:* The nervous system plays an important role in establishing joint disturbances in the body. Patients seem to extend their physical selves and their nervous selves beyond their limit of tolerance, and, as a consequence, exhibit profound fatigue. The importance of fatigue as a factor cannot be ignored. Any disturbance or alteration in the normal physical or mental routine functions — for example, over-work, socioeconomic disturbances, dietary errors, infections, etc., generally results in symptoms of fatigue. In fact we look upon fatigue as a preceding event influenced by the patient's occupation, the patient's ability to adjust himself to environmental hazards, and the physical and neurological status of the patient.

Fatigue must be diligently searched for in the patients, because they either fail to recognize this phenomenon, or refuse to admit to its effects. When we search for fatigue, it is not necessarily the fatigue of physical stress and strain; it can be of an exhausted nervous system.

Arteriosclerosis and osteoarthritis have a common background; they are the results of degenerative changes. These are vascular conditions which result in arthritic symptoms. We have found variable degrees of elevated blood pressure in our patients. We have observed that mild degrees of passive congestion often cause aches in the legs after a day's work, and nocturnal leg cramps are not uncommon. In these patients, the status of the arthritis is apparently dependent to some degree on the existing cardio-vascular disease. Attention to these cardio-vascular changes will frequently have a favorable effect on the existing arthritic symptoms.

Climacteric factors often influence osteoarthritis. We appreciate that the climacteric is that time in an individual's life when anticipated, yet undesired, changes occur. It represents that time in life when anxiety tensions predominate and mechanical factors begin to take their toll. Obesity becomes a problem in many patients, because a majority of these patients use increased dietary intake as an escape mechanism from the added burden of stress and

strain, thus increasing the load on already burdened joints. Just how much of a factor the climacteric is in osteoarthritis has not been determined, but since many patients date their arthritic symptoms from the onset of their climacteric syndrome, we must accept it as a factor. We are convinced that the male is as susceptible as the female to osteoarthritis at the onset of the climacteric.

What can be done for the patient with osteoarthritis?

Treatment of Osteoarthritis:

From the standpoint of joint pathology, we know that osteoarthritis cannot be cured. Once degenerative changes of the cartilage and bone have become manifest, they take on permanent characteristics. These changes, because of the constant use of the joints, tend to progress. In some cases this progression comes to a halt as a result of interlocking of the joint, and no further activity is possible.

We know we cannot alter the pathologic changes; however, the patient has definite complaints, symptoms which are amenable to treatment. The management of these complaints will, in a very large measure, depend upon the physician's attitude toward the patient and his knowledge of therapeutic measures applicable to the patient's symptoms. The patient who has a desire to get well and has an understanding of the disease will cooperate.

It is important to allay the patient's fears by frankly discussing with him the nature of osteoarthritis. No doubt these fears are aroused by contact with patients with rheumatoid disease, which develops a picture of invalidism. The patient should be assured that osteoarthritis rarely, if ever, produces the crippling of the joints as observed in the rheumatoid patient.

The use of rest as a therapeutic procedure in osteoarthritis is probably the most essential phase. In those patients in whom fatigue is a factor, and who must be taught to relax, we prescribe the following regimen.

At the end of each hour, by the clock, after arising, the patient should cease immediately what he is doing and sit down, doing ABSOLUTELY nothing for five min-

utes, by the clock. This procedure must be repeated every hour that the patient is active, other than during social times.

Relaxation is obtained by the use of Dimethylane, a compound with muscle relaxing and tranquilizing capacities. This drug is available in enteric coated capsules, each capsule containing 0.25 Gm. We start patients on two capsules after breakfast, one after lunch, and two at bedtime. After ten days or two weeks on this schedule we reduce the dose to one capsule three times daily.

Rest is essential not only for the patient as a whole; it is also necessary for the affected joint. Inhibition of wear and tear on the joint will assure us of less damage and a possibility of some repair. If enforced rest of a joint is indicated, the use of splints or braces should be in order. It is suggested that since this would represent an orthopedic procedure, the final decision be left to an orthopedist. In osteoarthritis of the spine, the site of the pathology will dictate the procedure. This will determine whether the patient should or should not sleep on pillows, whether bed-boards should be used, and whether or not a belt or strapping will aid in control of the condition.

We have mentioned obesity as a factor in osteoarthritis. It is not necessary to stress the importance of weight reduction—this is obvious. In dealing with this factor we utilize psychic control, a balanced diet which will not cause a too precipitous weight loss, and proper attention to bowel function.

Carbohydrates are reduced in the diets. We make use of a protein hydrolysate of high biologic value supplemented with vitamins (Vi-Protinal) in our scheme. We use this preparation not only as a food supplement, but also as an appetite depressant. One or two tablespoonfuls a half-hour before meals will adequately control "hunger pangs", and as a consequence the desire for more than the permitted diet is satisfied.

The psychic control is best managed when the patient is in a state of relaxation. As was mentioned previously, we use Dimethylane, and we are at present trying a combi-

nation of Dimethylane and Reserpine for this purpose.

Many of these patients, particularly those in their menopause, manifest evidence of abnormal capillary fragility and permeability. To us, a normal capillary system is essential for the maintenance of good health and nutrition to the joints. In our extensive study over a period of eight years^{3,4,5} we have found that a combination of hesperidin (a flavonone glycoside found in extracts of citrus fruits) and ascorbic acid (vitamin C), when given in adequate doses over a period of time, has the capacity to correct abnormal capillary fragility or permeability in arthritic patients. The use of Hesper-C apparently enhances the efficacy of the treatments directed toward the disease entity involved.

The use of analgesics to control pain should be dictated by the discomfort of the patient. If the pain is severe and interferes with proper rest, an analgesic should be prescribed. We must realize that pain is the watchman acquired by the body to prevent or guard against overuse of the joints. Our choice of an analgesic is aspirin; however, it is suggested that you use the analgesic which has given a majority of your patients the desired effect.

We are ever alert to new therapeutic procedures which might be profitable to the patient. Thus, we feel it is to our advantage and to the advantage of the patients to work in close cooperation with the research pharmacologist and pharmaceutical chemist.

For several years now, we have been using a preparation, nicotinyl salicylate, because it was presumed to exert a two-fold effect — that of an analgesic and that of a vasodilator. We are disappointed with its analgesic action, but we are impressed with its vasodilator effect. This type of action is desirable in the patient showing disturbances in the peripheral circulation. This preparation can easily be supplemented with one half the effective dose of aspirin to produce a desirable and adequate analgesia.

When joints other than the spine are extremely sensitive and painful, we resort to

interarticular injections of Hydrocortone, Cyclaine or procaine solution. This procedure is limited to those patients who do not respond to the conservative treatment described above. Caution must be taken not to infiltrate the bursa.

Sedation is sometimes prescribed in combination with analgesics. It is suggested that the physician use the combination which in his experience has produced the most desirable effect. Since we have been using Dimethylane, the muscle relaxant and tranquilizing agent, we have found less use for such agents as the barbiturates and bromides.

The use of heat, particularly moist heat, is recommended as a soothing agent. Caution should be stressed because of the possibility of burns or scalding.

Liniments and ointments have been used and are used as heat-producing and soothing agents. We have recently started to use an unguent containing N-Propyl Nicotinate for topical application. This unguent, applied with very gentle massage, produces an erythema resulting in local heat. It does not produce any undue irritation nor have we observed any reaction or blistering. This preparation is on clinical trial with us, and is not available as yet through regular channels.

We agree with the observations that "the proper prescription for the patient should include the balancing of physiological assets and liabilities resulting from the specific effects of the disease, the general response of the body function, and the effects of treatment procedures. Balancing the therapeutic program for the physiologic needs of the patient is dependent upon clinical empiricism."⁶

In conclusion, may we add that the physician dealing with osteoarthritis should not permit his attention to be distracted from the whole patient by the clinically established alterations in joint function. The physician in general practice is in the enviable position of being a "family doctor", interested in his patients primarily, and the disease, to be "cured" as quickly as possible. The general practitioner is in the position of an adviser and a guide — to advise philo-

sophically and guide medically. Attention to minor injuries physical and mental can be more effectively stressed by the family physician, and thus catastrophic consequences can be prevented later in life.

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THE LAWYER LOOKS AT THE DOCTOR*

HON. JOHN BIGGS, JR.**

President Shands, President Van Valkenburgh, President Tunnell . . . President Tunnel, President Van Valkenburgh, and President Shands. It is hard to know — protocol-wise — which of you should be named first. Convention would require that the head of the senior service should be first recognized but it is impossible for me to know which is the senior service here since both our disciplines probably began at the same time in the same primordial cave in the mind and under the hands of a medicine man who, and not incidentally, was also a judge and a lawmaker. To render due obeisance to all of you, I bow to all of you at the same time and simply say:

"Presidents and Ladies and Gentlemen."

There is always excitement about a "First!", the breaking of new ground, the entry into a new field, the laying of the corner stone for a new structure! All of us today are doing just that. It is my pleasant and exciting duty to push that corner stone a little bit forward toward its site. Dr. Hadden and Dr. Polsky, who will speak after me, will do more than their part toward the same end. As will Judge Herrmann and the distinguished members of his panel, who will be heard this afternoon. But you, doctors and lawyers and members

of the general audience, will or will not put that corner stone into its place — as our words and your thoughts move or do not move you. The responsibility is yours as well as ours.

This is the first Medico-Legal Symposium ever to be held in the State of Delaware. And I have the honor to be the first speaker. To continue the proliferation of "Firsts", I have the honor of being the first speaker at the first Medico-Legal Symposium given in the *first* City of the *first* State.

He who dares speak first on such a first occasion bears a heavy responsibility. He either sets a tone or he does not set a tone. If he does the former he is fortunate — if it be that he sets the right and proper tone. Otherwise, it would have been better if he had not spoken at all. I have never deemed myself a man worthy of contriving messages of wisdom to the audiences of this land. I therefore crave your indulgence, if not your mercy.

I have given this effort of mine the rather too pretentious title: "The Lawyer Looks at the Doctor". May not a cat look at a king? But there is an obvious, obverse title which has already come into the minds of most of you: "The Doctor Looks at the Lawyer." I, of course, am not a doctor but I shall try to be fair to both professions and, if what I say contains a little acid, I hope that my mild criticisms may prove helpful.

There is of course much in common between the law and medicine. Both are jealous mistresses — ladies who keep one awake at night. Perhaps the doctor suffers a little more in that respect than does the lawyer for I have never heard of a court which called a case for trial at two o'clock in the morning — though judges are certainly as unreasonable as other men. But both professions deal with matters of life and death — the vital stuff of which men's lives are made. Lawyers deal more with human rights than do doctors in a general sense, though "*the right to live*" conferred by the doctor is the greatest right of all, and I note that when a lawyer falls gravely ill he calls for a medical man before he sends for his brother practitioners. It must be admitted also that in matters of life and

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** Chief Judge, United States Court of Appeals for the Third Circuit.

death we judges function — shall I say — somewhat negatively.

Both disciplines require years of exacting training: four years of specialized education before a college graduate may practice law and at least six years before the man with the ordinary university degree is generally permitted to practice medicine. Neither profession can or does command very large financial returns. And this is as it should be. The lawyer is an officer of the court and must put his duty as such before any other consideration. Let me assure you that this obligation, taken under oath, is a living force in the lives of most attorneys. And all of us are aware of the dedication of the doctor to service, and such of us who have been in his skillful hands know his zeal and high-mindedness.

The doctor is the physician to the individuals which comprise the community. The lawyer is a physician to the community as a whole, to the State. A very substantial fraction of our lawmakers in both state and national legislatures are members of the bar. The enforcement of the laws rests in the bench and bar.

But more and more both the lawmaker and the law giver must rely on experts trained in fields other than the law. We live in a great and dreadful age. The A bomb has become the H bomb, and we are not yet half way down the alphabet. The public — whom both professions serve — and must continue to serve — is faced with a technological development burgeoning with a fantastic and alarming rapidity. We lawyers, whether of the bench, the bar, or the legislatures, must face the doctor squarely and must call for help.

Statistics are rarely too exciting things but on occasion they can be more than startling. They can be terrifying! In connection with the work of a Committee of the Judicial Conference of the United States I have had to consult some experts known as demographers. Do any of you know what a demographer is? I did not know myself until very recently. A demographer is a kind of wizard who sits in the bottom of a well neck-deep in statistics of all kinds and prophesies — there is no bet-

ter word — what the population will be in a given state or nation in — say — 5 years, 10 years or 20 years. There are at present about 163,000,000 people in the United States. The demographers insist that by 1975 the population of the United States at a minimum estimate — I repeat, a minimum estimate — will consist of at least 227,000,000 souls. The problems created by an exploding population rate plus an exploding technological development — and I do not intend to make a bad pun — are indeed tremendous. And in solving them the doctor and the lawyer must play a great part — cooperatively.

In saying this I am not suggesting that the lawyer and the doctor have not cooperated in the past and that that cooperation has not been of a relatively high order. I am saying that it must be of a much higher order if the public is to be properly served.

What are the aims of the medico-legal institutes and the medico-legal symposiums which are coming into being all around the country?

One of the most important of these benefits will be the improvement of communication between practitioners of law and medicine. Communication is really a problem in semantics. It is of little use for a doctor to testify as to *cranio-cerebral trauma* if neither judge nor jury knows what he is talking about, and it is of small aid in the disposition of a criminal case for the judge to insist that the testifying psychiatrist must answer categorically whether the accused knew the difference between right and wrong when he committed the crime. Each profession has too strong a tendency to adhere to the rigors of its own vocabulary. A better knowledge of each other's disciplines will cure that defect.

Another substantial benefit to be effected is the providing of sufficient facilities for professional training of the doctor and the lawyer in each other's fields, and the means of advanced study for the members of both professions.

And, last, but the most important benefit of all, is the employment of the skills of both professions, not only in the court room

and at pre-trial, but also in the actual enactment of legislation which the public interest sorely demands.

Let me deal first with one of the pressing situations requiring legislation. There are over 2,000 narcotic cases filed in the United States district courts each year and the number is constantly rising. But the narcotic cases which come into the Federal courts are but a fraction of those which flood the State tribunals.

According to a Preliminary Report on the Narcotics Traffic in the United States of a Subcommittee of the Committee on the Judiciary of the United States Senate, filed on January 9, 1956, there are 2,000 persons arrested each month in the United States on narcotics charges and the traffic now costs over \$500,000,000 a year. Federal, State and local enforcement officers all testified that 50% or more of all crimes committed in our larger cities are attributable to narcotic addiction or to the illicit drug traffic.

Moreover there is a problem of "contagion" for it appears that over 90% of the addicts who came before the Subcommittee testified that they began using drugs because of so-called "friends" or "associates". And, with the vast foreseeable increase in population, it is obvious that if this problem is not dealt with soon it will create a vast community cancer.

Standards of practice must be set whereby our courts may handle these cases adequately. But new laws dealing with narcotics must also be formulated by our legislatures. In both areas the lawmakers and the law givers, accredited physicians to the community and to the State, must look to the medical profession. And both professions must cooperate.

In forensic medicine, particularly in that relating to the criminal responsibility of the mentally incompetent or the "insane" — as we lawyers and judges insist on putting it — there is an appalling division — a startling and unwarranted dichotomy between the law and medical science. Most of our courts still make use of the M'Naghten formula, laid down in England in 1843. The M'Naghten test is: Did the accused know

the difference between right and wrong when he committed the crime? If he did, he must suffer the penalty.

Most psychiatrists say that the test has no recognizable relation to reality. It is a lawyer's dream; the psychiatrist's nightmare. Most of the doctors who are psychiatrists will tell you that our asylums are full of mentally-ill persons — who know the difference between right and wrong and yet are largely uncontrollable in their social reactions.

Leaving out any moral issue, the M'Naghten formula, and its attendant psychological atmosphere, presents a great danger to the public welfare.

I say this because it is very frequently the case that the mentally-ill criminal goes from small crimes to large ones: for example, from simple assaults to rape or murder. When he commits the smaller crime, in most instances he is treated as an ordinary criminal: if he receives any psychiatric tests at all, the M'Naghten rule of knowledge of right and wrong is applied. He is found mentally competent, and guilty, is sentenced, serves his term and emerges from prison a more dangerous individual than when he went in. He then goes on to graver crimes. I could name many cases which have turned out that way — Smith, Elliott, McGee, Willard, or that "pleasant" young man who blew up a United Air Lines plane because he did not like his mother.

Putting it bluntly, the fault here lies primarily with the lawyers and the judges. To paraphrase an old adage: "He who sits may, but will *not*, read." The problem, however, can be solved by the doctor, particularly the psychiatrist, making the lawyer and the judge aware of the facts of life. The problem remains primarily one of communication, of semantics.

But the efficiency of forensic psychiatry — important as it is — is only a small part of a very much larger medico-legal scene. We are today greatly harassed — to put it mildly — by that socially unassimilable individual known as the "psychopath". And let me instantly apologize to all the psychiatrists present for the use of such a "dirty" word.

The so-called psychopathic group may include the actual or incipient drunkard, the dope-user who is or is about to become an addict, the bad check passer, the "mad" motorist, and the sex deviate.

In this field medicine and the law have not yet brought forth realistic methods of diagnosis or treatment and criminal sanctions. Most of our present statutes are quite inadequate. To use an example, the chronic sex deviate and molester of children is not cured by a prison sentence. Yet we very frequently send him to prison — to have him emerge and repeat his offense. He should be institutionalized until his aberration has been cured. If it cannot be cured, he must remain permanently in an institution. Such proceedings will require new laws, and the lawmakers cannot enact them without the intelligent aid of the medical profession.

As our population increases so our psychotics and psychopaths will grow in numbers. I can foresee a time when the community, with the aid of the medical and legal professions, will be able to devise preventive statutes — statutes which, constitutionally, may permit the discovery of the abnormal individual at an early age and require his treatment before he can become an actual social danger. Minnesota passed a statute of this general kind relating to the sexual psychopath in 1939. It was held constitutional by the Supreme Court of the United States in an unanimous opinion written by Mr. Chief Justice Hughes. Bear in mind, my friends, that if the juvenile delinquent is not cured inevitably he will become the adult delinquent.

Before concluding I wish to deal briefly with the doctor and the civil side of our law and law courts. In the 86 Federal trial courts, 7,000 cases were filed last year arising out of motor vehicle accidents. It is a very conservative estimate to say that at least 10 times as many motor-vehicle accident cases were brought in the Courts of the 48 States. In other words a total of 75,000 such cases are filed each year in the courts of our States and Nation. It is estimated that by 1975 the number of motor vehicles in the United States, now 63,-

000,000, will grow to at least 100,000,000, or an increase of approximately 60%. There will therefore be approximately 120,000 motor-vehicle accident cases a year. As you know, such suits involve almost every type of personal injury, from whiplash injuries of the neck, to maxillo-facial injuries, to old fashioned fractures of tibia and fibia. When these cases are being tried the judge sees almost as many doctors as lawyers.

We are glad to see you there, gentlemen. You are pleasant companions for our business hours, as well as for our periods of social relaxation, and we listen to you. And we could not understand many cases without your assistance! But on one occasion I heard two skillful physicians alternately *prove* and *disprove* secondary complications following a "traumatic episode". I have gotten very fond of the word "episode" as it is used in medical testimony. The plaintiff in the case in question had driven his car at a high rate of speed head-on into a stationary steam roller. I would have said that the occurrence was a little more than an "episode", rising almost to the dignity of an "incident".

The foregoing is not said despitefully, but by way of a gentle nudge. Let me make it clear that I am not objecting to even skillful physicians differing in their diagnoses. Heaven knows they differ less than lawyers and judges. I am simply trying to point a very small moral. The vocabulary of the testifying physician is often as unintelligible to the jury as are the instructions of the judge. Through symposiums and medico-legal institutes we will learn the rudiments of each other's disciplines and we can simplify our language — perhaps to an extent where it can be understood by the laymen who perforce must frequent our courts.

The practice in tort cases, motor-vehicle accident cases, can be standardized and so improved that the average juror can find the facts with accuracy. Clearer and more precise medical reports would — I am convinced — result in a very much greater percentage of settlements and would save the time of the doctors, the lawyers and the judges. And on the other side of the coin,

a more earnest and intelligent effort on the part of lawyers and judges to understand medical testimony would be of tremendous aid in the speedy administration of justice.

One more "episode" and I am through. It is very probable that because of increasing economic pressure, the great number of motor-vehicle accident cases, and the uncertainty of verdicts, that a system somewhat similar to that employed under the Workmen's Compensation Acts will come into use in these cases. If such a system is to be employed, the doctor and the lawyer must play the leading roles in creating it.

The speakers who follow me will — I know — develop in more detail some of the ideas which I have touched on so cursorily.

May I add my hope that this symposium will open a door through which the doctors and lawyers of Delaware may freely pass into a common meeting room for the good of their professions and for the public weal.

Thank you.

TOTAL JUSTICE — CAN IT BE ATTAINED?*

by

SAMUEL B. HADDEN, M.D.,**
Philadelphia

One of the reasons for introductory remarks of this sort is to justify the invitation to participate which the chairman of your program committee extended to me. It may be that because of those things mentioned by him I am regarded as an expert on forensic medicine. However, I wish to dismiss from your collective minds any thought that I can qualify as an expert on medico-legal matters. My appearances in court have been so infrequent that I am sure few judges in the courts of Philadelphia have any recollection of my ever having appeared before them. There are several reasons for this. Early in my career I had a chief who was a profoundly scientific man; he impressed upon me his strong feelings that one should not voluntarily accept cases from lawyers for the purpose of examining and testifying in courts. During nine years of close relationship with him I appeared

in court only in those cases where I was called upon to examine and treat patients during their hospitalization. During those early years my greatest interest was in the field of organic neurology but gradually my activities in the psychiatric field developed to a point where, although I am certified by the American Board of Psychiatry and Neurology in both specialties, my practice has evolved into one that is essentially psychotherapeutic. This is so time consuming and my days are committed so far in advance that I do not accept cases in which litigation is anticipated.

Although certain of my experiences in court might justify the development of contempt of legal procedures, I have always had great interest in and profound sympathy for all efforts aimed to improve the understanding between the two professions represented here today. While I would be regarded by many as a relatively inexperienced expert witness, I do hope that you will not consider me naive. The problems that confront us are so enormous that I should like to present one restricted facet for our consideration. Theoretically, our system of trial by jury is excellent but, like many other aspects of our democratic way of life, it has shortcomings because it involves human beings; human beings whose state of development is not adequate for the complex roles they are called upon to play in our society. While many lack intellectual endowments for their role, their emotional immaturity is the most glaring shortcoming. I might therefore take the privilege of titling my presentation "Being Human — How This Influences Court Proceedings".

The court of trial is presided over by the judge. He is usually a distinguished lawyer who, after endorsement by his bar association, has been elected by his political party to this office of trust. His chief function is to see that justice is served in the deliberations in his court. He is called upon to see that a set of rules is followed in presenting evidence before the court, and eventually to charge the jury with the task of bringing in a verdict in keeping with the indictment and with the evidence presented in his court. He is charged with clarifica-

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** Associate Professor of Psychiatry, University of Pennsylvania School of Medicine.

tion of evidence. Within certain prescribed limits he may comment upon evidence and, when he feels there is a lack of evidence, he may actually direct a verdict in order that justice may be expeditiously administered.

The litigants before the court are, as a rule, represented by one or more attorneys. These gentlemen have followed the prescribed course of training and by examination have proved their competence, and the local bar association has accepted them into membership — if the rolls are not competitively overcrowded. They are all called upon to comply with a certain code of ethics, with which the legal members present are familiar but of which I know relatively little. The Bar Association in most instances is permitted by law to discipline members by suspension of privileges or dismissal.

Since we are interested in those court proceedings in which medical testimony is involved, let us now turn to the medical witness and his role in the court. The physician has been trained in prescribed manner in the prevention, recognition and treatment of disease, and has some competence in evaluating the future course of disease entities. His competence has in a fashion been determined by a medical school faculty, a board of examiners, and he is, as a rule, a member of medical societies, the most important of which is his County Medical Society. Membership in this makes him a member of the medical society of his state and of the American Medical Association. Few if any of these societies have power comparable to that of the Bar Association which ordinarily can exclude a man from the practice of law in his community. Medical societies cannot do so; this power is the exclusive right of the state in which the physician is licensed to practice. Please remember that medical societies do not have the power to exclude from practicing medicine physicians who are licensed by the state. The most severe penalty they can inflict upon an unworthy member is deprivation of membership in the organization. As a group, therefore, we have no power to keep out of the courts unscrupulous physicians whose testimony is not above reproach, and you may be sure it is

this same individual who is responsible for much of the criticism of the testimony offered by physicians in courts. Like the lawyer, the average physician is acquainted with a code of ethics that should determine his action in the court as well as in the handling of a patient.

Another important individual in the court procedure under consideration is the plaintiff. I shall, with your permission, try to present a composite picture of such a plaintiff. It is my aim to show the effects of two different treatments of basically the same situation. In the first, the situation is the chief concern of those involved; in the other, it is the individual who is the chief consideration. In one situation he is the plaintiff, while in the other he is wholly a patient. In the first instance the plaintiff is usually an honest, hard-working man with a wife and three or four kids. He is respected in his community, pays his bills—even his doctor's bills. He goes to church and, like some physicians and even lawyers, may chisel a little on his income tax. He has an occasional row with his wife; in the ten or twelve years of his marriage he has not succeeded in convincing his wife's mother that her daughter was not an idiot for marrying such a bloke as she considers him to be. He has some ambition to educate his children and give them opportunities he did not enjoy. In order to keep up with the Jones' his wife has probably pressured him into buying a second hand car, on which there are still several payments to be made. There is a 21" television set in the living room, with many more payments due. He has put his foot down on a new fur coat for his wife, and this act stirs up another tirade from the mother-in-law. The wife agrees with her mother that he is a stingy old miser, but on this matter of a fur coat he is adamant. He is known to be stubborn and immovable but when stopped by a traffic light at Broad and Main he was tossed violently about as the truck of a utility company slammed into the rear of his car, when it could not stop on the icy pavement.

As he regained consciousness in the hospital a few hours later his wife and her mother tearfully petitioned God to spare his life. A few weeks later when he had re-

turned home, they were thankful for the progress he had made and were thinking of further "recovery", not only enough for a new car but maybe enough for that fur coat — and perhaps a little nest egg to take care of part of the kids' education. His wife and her mother ridicule him for even thinking of accepting the figure offered by the utility company; the lawyer they have engaged agrees with them and speaks in terms of a verdict many times larger than the sum proffered. The attorney does not, however, stress his fee of 50% of the verdict.

The injured one is assured by all his relatives and friends that if he goes back to work too soon he will never get much out of the company, and so he and his family skimp along during the early weeks of his unemployment. He is humiliated when the TV is repossessed by the finance company in broad daylight and he swears that someone is certainly going to pay for the wreck they have made out of him. You see, the plaintiff is behaving like a human being; he is angry. "Those whom the gods would destroy they first make mad".

The plaintiff's sound, honest physician has been calling upon him with reasonable frequency and has tried to reassure him that he is going to be all right. The failure of his patient to recover is frustrating to the physician; he knows that all the man's contusions have healed; the callus is strong enough to be weight-bearing and although the patient had a concussion it was not severe and should be clearing by this time. As the symptoms continue, the patient seems to be a bit dissatisfied, and when he says "Doc, I thought I'd be out of this long ago", his trusted physician may defensively say: "Well, Joe, you got a hell of a going over when you were socked", and Joe will reply: "You're telling me?". You see, the doctor behaved like a human being, and now that he and his patient are once again on a basis of agreement. They are behaving like human beings, feeling human beings. By this time the utility company knows Joe is not going to settle and feel they had better protect themselves by having Joe looked over by their own doctor.

Like Joe's physician, he is a competent, honest person. His examination is careful and painstaking; his attitude toward the patient may or may not be a considerate one. He sends his report to the company and states that he finds a well healed fracture that should bear the patient's weight easily, and sees no other signs of organic disease. He concludes his report by stating the patient's symptoms are basically those of a psychoneurosis, and are not due to organic injury of the nervous system, will not be permanent and do not constitute a real disability. He may run into Joe's doctor and honestly say he couldn't find a thing wrong with Joe and he thinks the patient is just neurotic, possibly gold-bricking. Joe's doctor says that Joe got a hell of a going over by that truck and is entitled to much more than the company is offering. The doctors are behaving like human beings; they are emotionally involved in the situation.

By this time Joe's lawyer feels he ought to be fortified with the opinion of an expert neurologist. He wants a report he can use in court to support Joe's claim. The neurologist's findings are appropriately recorded and he reports no evidence of destructive disease of the nervous system. He has elicited from Joe a long list of subjective symptoms, all of which are found as prominent symptoms of a post-concussion syndrome — headache, giddiness, buzzing in the ears, blackout spells, weakness, irritability, lack of initiative, lack of confidence, loss of sexual power. To the members of a male jury, this last symptom alone is worth at least \$10,000.00. He has become seclusive, has lost all his friends and is indeed a pathetic person. The doctor is supported by many theses in the literature that these are the usual symptoms of a post-concussion syndrome. He may even bring in the fact that the patient may develop convulsive seizures in later life. (Some years ago, when I was acting as an impartial witness for a compensation referee, I was asked to examine a patient whose lawyer insisted on being present. He was indeed very useful for he reminded the patient of every single symptom he had had from the time of the injury until that hour. This was obviously

necessary because among other complaints offered by the patient was loss of memory).

The utility company responds by having an examination of the patient by their neurological expert. His findings are in agreement with those of Joe's expert — no evidence of destructive disease of the nervous system. Joe has given, possibly with the assistance of his attorney, the same long list of subjective symptoms. The company's expert, however, may play up the fact that Joe's nails are closely bitten, and that Joe admitted he has bitten his nails as long as he can remember. He may have examined Joe's service record a little closer and found that while Joe didn't have a Purple Heart, he was evacuated from North Africa to an NP clinic and discharged about April, 1944 with a diagnosis of combat fatigue. His report indicates that Joe was always neurotic. He, too, is a human being with feeling of strong identification with the authority that his company represents. He is like so many people who always vote the straight Democratic or Republican ticket; the cause is always just.

Like a medical witness before the courts, it is possible that I have used a word, neurotic, that is not fully understood by members of this group. As a matter of fact, I know that many fine physicians do not understand very well the meaning of this term and, like many of the lawyers present, regard the neurotic as some kind of a weakling or a malicious individual who is feigning illness for gain. I am sure that I could not find many of my neuropsychiatric conferees who would agree en toto with my definition of a neurosis as a group of symptoms that may be either of a physical or mental nature which occur in an individual at a time when he is unable to cope successfully with the circumstances of his life. The symptoms may bring about a varying degree of disability. The individual is incapable of dealing effectively with current situations because he unconsciously utilizes patterns of behavior that were forced upon him in earlier life. They were not effective patterns of behavior when he acquired them, and they never will be. (We all know that "man lives not by bread alone", but in his struggle for existence, eating with regu-

larity is indeed most important.) In addition to mere existence on the physical plane, man in the course of his growth acquires some concepts of what he ought to be and develops within a picture of what he himself would like to be. It is necessary for his comfort that he feel wanted, that he feel significant, that his efforts be appreciated, and that he be loved by someone. Demands of society are such that he knows he is expected to succeed and to carry out duties that may be assigned to him, and all through his growing up period he knows that only illness is a completely acceptable excuse for not carrying out those expected duties. As a child, whenever he misses school he must bring a medical excuse; when Dad expects him to cut the grass, only illness will exempt him from doing it; if he is too sick to perform his accustomed duties, not only is he excused from work but he gains the sympathy of his family and friends. If it appears that one has contributed to his own disability through such acts as drinking to excess or negligence, then sympathies are somewhat withdrawn. However, if disability is the result of someone else's behavior, especially their negligence, the degree of sympathy is intensified. For this reason when a person is injured as a result of another's negligence, not only is the disability understood and accepted but it is implied that the person responsible for it should be punished and made to pay.

It is rather a normal thing to prefer comfort to discomfort, and many times when an individual — like our hypothetical Joe — whose daily struggle is becoming less and less attractive and less rewarding, is injured by a great big, powerful authoritarian figure such as a public utility company, he not only obtains the pity of himself but of his neighbors as well. He is reinforced in his neurotic retreat by cultural indorsement almost to the same degree as the poor boy who developed neurotic symptoms while serving in the army.

I hope you will permit me a few moments to speak of the second situation, of neurotic disability in the armed services. We live in a great democracy where much emphasis is placed upon the rights of the individual, but unfortunately where very little

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¹Albertson, H.A. and Trout, H.H., Jr.: *Antibiotics Annual 1954-55*, Medical Encyclopedia, Inc., New York, N.Y., 1955, pp. 599-602.

²Prigot, A.; Whitaker, J. C.; Shidlovsky, B. A., and Marmell, M.: *Ibid*, pp. 603-607.



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stress is put on the obligations of a citizen in the democracy; consequently when a boy's number is pulled out of a hat by his draft board it is considered a tragic calamity. The boy is called upon to give a period of his life in the service for his country, and it is felt to be a damned shame that he can't continue doing what he wanted to do. But, being healthy, he is shipped off to a training center. Fully aware of the fact that while he is able to do so he will be called upon to continue his service, when he twists his back upon the obstacle course he feels he has justifiable cause for dismissal from the service, but the harsh army doctors keep him in training. If he reaches a combat area the fear of enemy guns engendered in every one of us produces strange and disabling feelings; he feels weak; he blacks out; he shakes; he bursts into tears, vomits, and develops a whole gamut of distressing symptoms. Certainly in this condition he cannot continue in the combat area; he must be evacuated. He reaches a hospital remote from the lines and there a sympathetic physician acknowledges that the kid has sure had his fill and can't take any more. He is evacuated still further to the rear, and eventually comes home, a neuropsychiatric casualty. All during the chain of evacuation he feels that once he gets home he will be all right, but he will bring with him a feeling that will never leave, a feeling that he did not do what was expected of him; he failed. He cannot become healthy again; he cannot become normal; the rest of his days he must continue to have bad nerves and function below the peak of his actual efficiency, to be sick, to be a failure, for only by remaining ill can he justify his being excused. When he comes home we pay him for being a failure. We might say this was the picture during the early stages of World War I and World War II. During the late stages of World War I, psychiatrists in the forward area knew that if a boy once got behind the lines he would never return to the field and would continue to be a failure throughout the rest of his life. They became hard-boiled, and sent him back to the combat area, but this hard-earned lesson was forgotten by the time World War II began.

Again over-identification with the disturbed boy caused the psychiatrist to send him home as one who had done his bit and couldn't take any more. Before the end of World War II, psychiatrists once more realized they were doing such a boy no favor, and he was sent back to combat areas to succeed. Korea came on so soon after World War II that not only had we not forgotten the lesson but the medical personnel who had handled these problems toward the end of World War II were on the scene in Korea. A more realistic program was carried out, as a result of which few boys are going to be compensated for neuropsychiatric disabilities developed in the Korean campaign, and fewer of the flower of American manhood will have to continue to live lives of failure for paltry sums given as compensation, paltry sums in the sense that they are totally inadequate to compensate for the loss sustained and the restricted life resulting from neurotic handicap to do and to succeed. Fewer wives and children will be sacrificed to save poor Dad's ego in order that his semi-invalidism may continue to be a demonstration of the horrible acts of war. As a consultant to the Office of the Surgeon General I saw boys with supposedly shattered nerves as a result of the ordeal of combat; within a few hundred yards of the main line of resistance I saw them treated by division psychiatrists who knew that these soldiers were reacting to fear. They did not ridicule them as gold-bricklers; they were not treated with scorn. The psychiatrist was sympathetic and reassured them that their response was understandable. They were justifiably scared but they had a job to do; they were reassured that they would recover in a matter of hours, that they would regain composure and would go back and join their buddies and carry out the job assigned to them. The boys soon knew that it was necessary to do so because their replacements were nine thousand miles away. They went back, and most of them completed their assignment. I had a dramatic experience of being in a Janeway hut of the division psychiatrist when a portion of a unit, made up of men who had served their allotted number of months and gained sufficient points for re-

lief, came down from the lines. These three boys, under twenty-one, sought the division psychiatrist, and when they came into his presence they threw their arms around him and hugged him, and when at last they could speak they thanked him profusely for sending them back to combat when he had seen them weeks earlier after they "cracked up." They had succeeded and they knew that they would not need to spend the rest of their lives living out the excuse for their failure, nervous disability. They returned to civilian life healthy men with an experience that was the big thing in their lives. They were salvaged by a group of medical men who were interested in effecting the recovery of their health, not their financial recovery.

In our medico-legal deliberations we should keep these experiences in mind. Please, gentlemen, try and become interested in the physical and emotional recovery of the injured rather than his financial recovery. Physicians and lawyers are equally responsible for the invalidism of many individuals who can always explain their partial failure on the basis of an injury that was the fault of someone else. The mere fact that such a group of prominent attorneys and doctors are deliberating here this morning is a clear indication of the fact that it is recognized as a serious problem.

For the sake of discussion I am going to present to you a procedure which I feel would free our courts of most of the litigation revolving around injuries. We might teach our medical students and physicians first, that they are completely responsible for obtaining the quickest degree of mental and physical efficiency in patients who have sustained injury; second, that they shall discourage such patients from engaging counsel until the greatest possible recovery has been obtained, and third, that they shall encourage patients, with or without counsel, to work out a settlement with the party who caused the injury. It is my firm belief that under such procedure nine out of ten cases now brought into the courts could be settled without legal intervention, and a vast pool of manpower saved for industry. I make these suggestions because I know that if men get together in the ab-

sence of stress to work out a fair settlement, they will do so as objective and intelligent human beings. When they once become involved in a contest, however, identifications on an emotional basis are stirred up and then they will behave like human beings, human beings who have not reached the high stage of maturity required in the circumstances. The injured litigant is so often further traumatized by evidence brought out to "strengthen his case" but which almost is certain to weaken the confidence with which he faces the future.

I hope, gentlemen, that we can begin to appreciate that we are naive to believe that attorneys always behave in keeping with the highly conceived code of ethics of the American Bar Association, and that physicians are consistently objective and factual in their testimony, and that even our judges are completely detached.

NEW BRIDGES BETWEEN LAW AND MEDICINE

SAMUEL POLSKY, LL.B., Ph.D.,*

Judge Biggs was speaking on behalf of organized law in Delaware, and Doctor Hadden was speaking on behalf of organized medicine both in Delaware and Pennsylvania. I am not sure that anything is left except talking on behalf of what seems to be the majority of this audience, the associated presidents that are assembled here.

The law does rely on medicine to a greater extent than medicine relies on law. We must have the aid of the medical expert in the administration of justice. But medicine, too, relies on others. Medicine has been relying on electrical experts here for about an hour. And these electrical experts, representing as they do the lay public, must in time come to rely upon both lawyers and physicians as they attempt to work out problems that are common to both groups.

Each profession, law and medicine, has developed its own particular intraprofessional code. In law there are canons of the bench and bar; in medicine there are codes of medical ethics.

Each profession has backed its standards by an oath. In law there is the oath of ad-

* Director, Philadelphia Medico-Legal Institute.

mission to the bar, and in medicine there is the Hippocratic Oath. And each profession has been careful to stress the duties of the members to each other, to the public in general, and to an ideal. In law the ideal is justice. In medicine the ideal is healing mankind.

Each profession has also stressed its own methodology. In law the method is that of the adversary process. In medicine there is the scientific method.

Apparently what we have are parallel lines of development that, like the old Euclidean parallels, are destined never to meet no matter how far extended. However, we no longer live in a Euclidian age. This is, we are told, the age of quantum mechanics; this is the age of Einstein's relativity. And Judge Biggs pointed out that this is also the age of atomic energy, the atom bomb.

Today we are taught by our mathematical physicists that parallel lines, when extended sufficiently far into space, do tend to meet and that they aren't even straight, they tend to curve toward each other, or perhaps in other directions.

Each Workman's Compensation case—and they are growing in frequency in every state of the Union — creates a quantum of energy bringing law and medicine together. Motor vehicle accidents, comprising as they do more than 70% of all civil litigation, and involving as they do to some degree or another the utilization of medical testimony, have become the Einsteinian relativity, forcing the parallels of law and medicine together. Not just bringing them together, but forcing them together.

We must learn to live with each other. Personal injury litigation is the principal business of the courts now, and it requires the skills of both law and medicine.

Nuclear fission occurs every time a lawyer calls a doctor and says, "Doc, that patient you have been treating has his case coming up tomorrow. I am sorry I haven't had a chance to talk to you before, being pretty busy, but I would like you to be present at ten o'clock in court."

Nuclear fission also occurs every time the lawyer talks to the doctor — who has been

treating his client for about eighteen months, seeing him rather regularly — and is sharply told, "Well, I'm sorry. I don't like to get into court and I would rather not get mixed up in this thing. And don't subpoena me; I am not going to be there, I am too busy, I have other things that are more important to my patients."

You have your own A bombs and your own H bombs of this nature. The real Hiroshima of these incidents — and they do rise to incidents, they are not mere episodes — were catalogued best by Judge Herrmann in an article that he wrote recently. If any of you missed it you should read it. It is in the Delaware State Medical Journal, in the January, 1956, issue. It isn't just a catalogue of the episodes or incidents, but it has some good, sound, practical advice on what to do about it and how to avoid these incidents.

I think this meeting is in itself perhaps the strongest indication that medico-legal energy, like all energy, can be utilized for good as well as evil; and it is my purpose this morning to chart some of the constructive utilizations, if possible, of that energy.

We may begin with any one of three methods for integration of medico-legal knowledge and correlation of medico-legal function. Whichever model is selected will inevitably, in the long run, lead to the others. Each partakes of the others. The three models are: First, the professional model; second, the educational model; and third, the research model.

Let us look at this professional model for a moment, since that is essentially the nature of the group that meets here today.

By this I mean cooperative effort of bar associations and medical societies trying to work out their joint problems. These cooperative efforts stem from a realization that our separate codes of living in the two professions are no longer sufficient; that we must have some kind of interprofessional code of life as well.

But mere recognition of the mutuality of problems which this entails, although it is a good first step, is not sufficient and is a long distance away from a mutually satisfactory solution. Any solution that you at-

tempt to work out will pose preliminary questions.

Any solution, or any attempt to work out a solution, poses the question: What are the chances for success? Is this meeting merely an opportunity to drink coffee together, and to hear three people on a Sunday morning? Or is there some really substantial hope that there can be success?

There are some good reasons for asking such questions when the goal of law is justice and the goal of medicine is healing mankind. What do the two professions have in common? Is there a common denominator?

One of the virtues of asking rhetorical questions is that you may answer them yourself. My answers are in the affirmative. Both our professions ultimately seek the same thing, whatever special name we like to give our own efforts, and that common goal is truth. You can not heal mankind without knowing the facts of life and death, and the facts of trauma and diseases, and all this is simply the determination of truth.

As facts create medicine as a profession, equally facts create law as a profession. What our judges and lawyers seek in the court room under the scales and sword held by that prepossessing lady known as "Justice," are simply the bare facts that add up to truth. Rules of law are merely the rough tools that we have evolved to uncover truth. And sometimes the lawyer's tools get in the way of his objectives, just as sometimes the physician's tools on the operating table lead to shock and death rather than life and health.

Granting a common goal, are not our methods so vastly different that we can never think in the same way, let alone communicate intelligently with each other? Is the adversary process different from the scientific method? Perhaps it is. And isn't one, the scientific method, a surer means of achieving truth than the other? Perhaps again, but actually we don't know. And it may be that we shall never know.

I suspect there is more than one road to truth, and there is no royal highway that

is straighter or less bumpy than all the others.

Some of you may have reacted to these suggestions with that ringing of alarm bells in the cerebral cortex that betokens a good healthy skepticism.

At this point I owe it to you to stop preaching, even though this is Sunday, and to start proving.

Item 1 in the order of proof is the fact that neither profession utilizes only the scientific method or the adversary process alone. Physicians, for example, after their rigorous pursuit in the laboratory have been known to publish their findings. Indeed such dissemination of data and conclusions is a necessary part of science; and perhaps distinguishes the medical scientists from the medical quacks.

What happens then? Why, the adversary process may be said to begin. Doctor "X" in another city and Doctor "Y" in another country attack the data and/or the conclusions and advance their counter-vailing data and reasons. Someone else rushes to the defense; still another critically questions the theory; all of which the originators try to meet. The theory may not be attacked and overthrown for a generation or may die in the next issue of the next scientific publication. Whatever its fate, it is decided by what may fairly be called the adversary process. Perhaps then the adversary process is just another phase of the scientific process, rather than something totally foreign to science.

Item 2 in the order of proof is that law has begun to recognize itself as one of the social sciences. Dealing with man in the aggregate is, of course, more difficult than dealing with man as an individually functioning unit. Until recently the multiplicity of variables tended to defeat laboratory experiments with man in the aggregate, but progress is being made.

At the University of Chicago, for example, law teachers are investigating what happens in the jury room, and are using the techniques of controlled experiment in group-function to do so. The scientific

method is therefore a part of the modern legal investigator's armamentarium as well as the medical scientist's.

Item 3 in the proof is the simple fact that scientific method is not confined to the laboratory. Einstein was no less a scientist because he used a pencil and pad of paper rather than a cyclotron in working out his theories and in his investigations.

Item 4 in the proof is that practicing physicians have each had to do what the legal process does every day; namely, to come to conclusions on insufficient evidence. The physician's clinical judgments in a given case may, of necessity, be based on appallingly little information. Yet, because a life may be in danger he is required here and now to do the best he can with the evidence that he has.

In a similar way law must make its clinical judgments in the court room on evidence that is often appallingly imperfect.

By this time you undoubtedly have better illustrations of your own and better data than mine to support the thesis that neither our goals, our ideals, nor our methods are antithetical. Therefore, we may reasonably anticipate a satisfactory mutuality and success in the solution of our joint problems. Where we begin in working out solutions is far less important than just plain beginning.

At the professional level there is available as one guide the Cincinnati code for interprofessional behavior. This is in many respects simply a restatement of what many lawyers and doctors have worked out as a practical medico-legal way of life of their own. Restatement, however, is badly needed and serves an important function when it can have the sanction of organized medicine and the organized bar rather than individual precept to back it up.

As a supplement to such an interprofessional code you may wish to consider the Minnesota plan, or the malpractice plan that has been adopted in one of the counties of Southern California. In California, when a malpractice case is brought to the attention of the County Medical Society a group of physicians meets and determines whether the doctor has or has not

lived up to the ordinary standards of care in that community. If the County Medical Society finds that there has been malpractice they do a number of things.

First, they provide hospital care for as long as it may be needed, and full medical attention. This means the best surgeons in the community and best physicians in the community, without any cost to the individual.

And, further, they provide expert medical testimony having the sanction and force of all organized medicine behind it in that community, without any charge to the individual who has been harmed by a member of the medical profession.

Of course, when that happens the case is usually settled. No defense attorney will willingly risk trial under those circumstances.

Many plaintiffs' lawyers feel that the malpractice plan just mentioned excludes the lawyer at the operative stage, and that the individual should have the right of representation by someone who is concerned with his welfare legally, as well as medically.

You may wish to enlarge your interprofessional code by legislation, such as some states have adopted, which permits the courts to tax expert testimony fees, when a doctor has been subpoenaed and is asked for an expression of opinion.

Or you may wish to call upon a supplemental project such as the New York Expert Testimony Project that has been described in a recent book. This project was carried out under a two-year grant of the Sloan Foundation and Ford Motor Company Fund. The practice has now been adopted by the Supreme Court of New York as a regular way of life, with the costs of providing experts met as part of the annual budget of the court.

Under this plan a medical record office has been established in New York. In the first pre-trial conference when the attorneys and judge get together, the judge generally has a fairly accurate idea of the plaintiff's medical position. But there may have been changes in that position, and if so they are made known to the judge either in enlargement or in diminution of what was claimed in the complaint.

The defendant then makes known his medical position. If the judge feels that there is a serious medical issue involved, and that what is keeping the two sides apart is primarily the resolution of this medical issue in terms of damages, he calls upon an impartial medical expert.

A group of men have been selected by the judges after consultation with the County Medical Society. These men have their names placed on a list and the expert that is selected in a given field is simply the next expert in rotation on that list. If he is not available for some reason or another then the succeeding name on the list is selected.

He does an independent investigation, submits his report to the court and to each set of attorneys, and the judge then calls both sets of attorneys in for a second pre-trial conference. At that conference the experience in New York has been that almost all cases are settled. That does not always mean that the impartial expert has, as Doctor Hadden points out so often must be the case, placed the complaints in their proper light by cutting down on the scope and area of that which is a real disability or real injury.

It was very revealing to find at least five cases, that I can recall, where the impartial expert not only found more than was claimed in the complaint but established substantial injury that had been totally overlooked by the expert — if you wish to call him that — that had been consulted by the plaintiff. So often the expert that is consulted by the plaintiff is simply the family physician who may not always be competent to ferret out all the possible disability that may be present, or to evaluate the full seriousness of the case.

None of these five cases could be settled at the first conference; nor would the settlement have been a just and fair solution at that stage. At the second pre-trial conference, after there had been an impartial investigation, the case was settled at substantially more than had been asked in settlement at the first pre-trial conference. This idea of impartial expert testimony works both ways.

Baltimore has a somewhat similar plan that has just gone into effect after a long period of study. There the costs are not borne by the court, they are taxed by the court on one or another of the parties, depending on the result. Three names are given to both sets of attorneys and the attorneys select a name out of the three that they can agree upon. If they can not agree the judge simply does the job of selecting for them.

The Philadelphia Medico-Legal Institute is contemplating a plan somewhat similar to both of these but more experimental in nature. It is designed to determine, for example, whether it would make any difference if more than one impartial expert were consulted by the court; whether there would still perhaps be a significant area of difference of opinion that ought to be made known to the court and the parties. And other matters, such as the use of interrogatories or questions submitted to the doctors, will be tested under the Philadelphia project.

We may find, once having embarked on such a plan, that interrogatories are impractical because the lawyers swamp the doctors with questions. But, since this is all under the control of the court, perhaps the interrogatories could be kept within reasonable limits; and it may be that these interrogatories would serve as a useful supplement or an economical alternative.

We are stressing the experimental aspect in Philadelphia, rather than attempting to adopt a pre-made plan, even though it is a plan that in the opinion of the lawyers and judges does work very well, whether in New York or in Baltimore.

These are all practical plans that may be expected to have an immediate appeal to the practitioner in law and medicine. They do not, however, fully meet the challenge of communication and the communication barrier between the two professions.

Since both professions are, in the highest sense of the word, learned professions I may, with confidence, turn to the second model, the educational model. The long-range aspect of medico-legal education begins in the curricula of the law and med-

ical schools leading to the LL.B. and M.D. degrees respectively.

You will be interested to know that strides are already being made in that direction. The recommendation of the Committee on Medico-Legal Problems, of the American Medical Association, provide as follows:

1. An effective department or division of legal medicine should be developed in every medical school;
2. The department or division of legal medicine in each medical school should teach a required course in legal medicine, dealing with basic material of general interest and importance to all physicians;
3. Elective courses dealing with forensic specialties or with particular areas of interest should be developed;
4. Teaching should not be restricted to undergraduate medical students, but opportunity should be provided for the training of graduate physicians in such special techniques of medico-legal investigation as forensic pathology, toxicology, hematology, and immunology;
5. Postgraduate seminars should be provided to meet the need of those engaged in medico-legal work, such as coroners, medical examiners, pathologists, practicing physicians, technicians in police science laboratories, and representative members of the district attorneys' staffs;
6. The staff of the department or division of legal or medicine should encourage the development and participate in the conduct of courses in the neighboring law schools;
7. There should be a close working relationship between the staff of the department or division of legal medicine in the medical school and the local office of the coroner or the medical examiner. Further, it is desirable that one or more members of the professional staff of that office have appointments on the teaching staff of the department.

The Association of American Law Schools is also vitally concerned. The last meeting of that Association, in Chicago in December

of 1955, had a round table meeting concerned with forensic medicine in legal education. There were a number of schools that participated directly. That round table is being continued through 1956 because of the interest shown by other schools who were not yet teaching courses in this area.

All the individuals who participated stressed the lack of teaching materials. If there were more teaching materials we could expect more courses to be offered by more law schools; but you can not expect any law school simply to take a member of its staff, ask him to educate himself in these problems, at the same time educate students in these problems, and at the same time work out teaching materials. When teaching materials have been worked out we will have courses of this nature in most law schools.

One of those schools that participated in the round table discussion in terms of presenting speakers was Harvard University, which first became interested in this problem in this country and is doing excellent work under the direction of Professor Ford and Professor Hamlin, in both the law school and the medical school. Boston College is participating by lending Professor Curran, who is a member of the Boston College Law School, to Harvard for these purposes.

The University of Maryland, under Professor Farenholt and his staff, is doing outstanding work. Western Reserve University, with Professor Moritz, who was formerly Professor of Legal Medicine at Harvard, and who started the Harvard Department and is now Director of the Institute of Pathology and Pathological Research at Western Reserve, and his colleague, Professor Schroeder of the Law School, are heading up a project of this nature, with brilliant results.

Temple University, where I am now engaged, offers three courses in the Law School at the present time: One in psychopathology in law, one in medico-legal problems of personal injury litigation, and a third in scientific proof in criminal cases. We are presently at work revising our ap-

proach in the Medical School so that the objectives of the American Medical Association may be met, perhaps next year, in the Medical School.

And elsewhere there is significant work being done. The Law-Science Institute of the University of Texas, under Professor Hubert Winston Smith, has undoubtedly done more than anyone else in this country in developing interest and short courses on medico-legal problems of personal injury litigation. The Law-Medicine Center of the University of Kansas City, and other work at other institutions swells the list.

Not only universities but professional organizations have gone into the field of education by having these short institutes, of one to three days, sometimes longer, designed to educate lawyers with respect to medicine. California is particularly active in this kind of thing.

All of the educational ventures suffer from lack of materials for instruction, at the present time. Moreover, a firm foundation in the universities requires graduate students willing to enter into medico-legal research as part of a program of higher education, working for degrees beyond the LL.B. and the M.D. We can not forever rely on the law and medical teachers to undertake these problems on a part-time basis, stealing time from their other lines of research. We must create continuing full-time medico-legal faculties, cutting across school lines, such as they have in Europe.

These needs for teaching materials, for full-time graduate students and full-time medico-legal faculties can be met in a number of ways. A school as wealthy as Harvard can set up a department and work out its problems in creating that department, slowly, over a number of years.

Perhaps the fastest and most certain way of accomplishing our goals is that method reflected by establishment of the Philadelphia Medico-Legal Institute. This Institute came into being as a result of recommendations of the Medico-Legal Committee of the Bar, which were unanimously adopted at an annual meeting of the Bar Association.

The Bar Association instructed its Chancellor to get in touch with the deans of all the law schools and medical schools in the immediate area and with the President of the County Medical Society, to see whether these individuals would be interested in a research organization such as the Philadelphia Medico-Legal Institute has become. There was unanimous interest and based on that the Philadelphia Medico-Legal Institute came into being.

Its purposes are, as I said, primarily research, but whether you start with research or education or professional activity, all of these things must come to pass; they all interweave and tend to lead to one another.

The Philadelphia Medico-Legal Institute is stressing research in a number of fields now — in law and the behavioral sciences, for example. A study of the sanctions that the law uses to control human behavior, is to be conducted in light of what the behavioral sciences tell us is known about human behavior; the investigators are a team composed of lawyers and physicians.

I have already mentioned the automobile personal injury project. There is another project in causation; a study of medico-legal causation, in Workman's Compensation cases where causation is perhaps to be seen in its broadest manifestation in both law and medicine; and a number of other projects.

While all these basic materials for research are being collected, teaching materials are to be set aside and ultimately collated. Materials will in part come from the files of practicing lawyers and physicians, with adequate safeguards as to identity of the individuals involved, of course, in each instance. It is important to get files that never reach the appellate courts, when perhaps the reason they never reached the appellate courts is that the medico-legal or the medical problem was so well resolved at the trial stage, or before, that settlement resulted; or a verdict that was not appealed resulted.

These files are important basic materials of research and they are also important, in fact the only real materials for teaching. We can not teach courses of this nature on

the basis of even the most distinguished appellate court opinions. And I say that having in mind what is certainly a classic medico-legal opinion; there has not been anything like it in this country at any time: Judge Biggs's dissent in U. S. ex rel Smith v. Baldi. But even that kind of thinking and writing is not sufficient for teaching purposes, although it is incomparably better than what we usually find in appellate decisions when we are trying to use cases to teach either law students or medical students. We must go back to the original records, the actual testimony and actual reports, hospital, medical and otherwise, of the individuals involved.

To conclude, let me note that integration of law and medicine is not so new and revolutionary as it may at first seem. I wish I had time to go into some of the instances of that; there are many of them. All the important instances so far as law and psychiatry are concerned are collected in Judge Biggs's book, "The Guilty Mind," but there are others in other areas of forensic medicine.

Let me end with this. Imhotep, who lived about 3,000 B.C., was both chief justice and chief physician to King Zoser. It is perhaps something of an anticlimax to add that he later became a god of the Egyptians.

Question and answer period following the morning session of the Medico-Legal Symposium.

THE CHAIRMAN: Now we have thirty minutes left in the morning session for questions and answers, and I will ask the three speakers if they will come up on the platform.

DR. ABEL KLaw: Mr. Chairman, I will raise a question that perhaps might explode a little bit. I was very interested in what Doctor Polsky had to say about the New York system for reference of cases to an impartial physician.

It has always been one of my firm convictions that until proven otherwise, all physicians are presumed to be impartial. Therefore, I raise this question: Under what circumstances can we justify a system whereby we say in this sort of a case the

court is going to appoint an impartial physician? Why isn't the physician who has already had to do with the curing or the treatment of this injured person — why isn't he impartial?

Why is it necessary to discard the attending physician, for example, the man who knows more about what went on than any other physician? Why is it necessary to cast him aside and say, "We have to have somebody else, who has never seen this patient before, because he is impartial"?

What is an impartial physician as distinguished from the ordinary physician? That is the question I raise.

THE CHAIRMAN: Doctor Polsky, can you answer that?

DOCTOR POLSKY: Yes. Let me digress before I attempt a direct answer. On any of the New York cases that do go into court, the testimony of the physicians selected by each side is presented, as well as the testimony of the so-called impartial expert. The impartial expert may be called by either side or called by the court, but no physician is denied the opportunity to appear and speak in behalf of one view or the other when the case goes to court. Very few of them actually get to court, however, since the procedure leads to a high incidence of settlement.

Secondly, I must say also in confession and avoidance, that perhaps the nomenclature is errant; perhaps we should talk about court-appointed rather than impartial physicians.

But I am willing to meet the problem on the basis of partiality and impartiality. Let us assume that three doctors are involved, all of whom are absolutely, scientifically qualified in the highest sense, and all of whom are as honest as any human being can possibly be. Yet I would still call the court-appointed physician the impartial physician, and neither of the other two impartial, in one important sense and only in this sense.

What happens ordinarily — and this accounts for part of the conflict, part of the battle of experts that we have in the court room—is this. When the plaintiff's attorney selects an expert to examine, he very often

has that expert not only examine but treat, unless this expert specialist can refer the case back to the family doctor under proper instructions for treatment. But whether the expert specialist treats the patient or not, the relationship that he enters into with this individual is very close to the ordinary relationship that a physician enters into with a patient.

It is necessary to build up a certain rapport to practice medicine properly. A bedside manner isn't just a means of getting patients and getting people to pay you fees; it is part of the therapy. This relation between physician and patient, getting him to believe that you really can help him, involves a reciprocal function. There is a certain natural sympathy built up toward him and toward his problems and toward his case, a very human kind of sympathy, as Doctor Hadden pointed out.

Therefore, he comes into court not only with his objective findings and the past medical history as obtained from the individual, but also with a certain unconscious sympathetic leaning toward this individual, trying to do what he can for him and his case. I am assuming it is all unconscious, there is nothing willful about it.

On the other hand, when the defense asks a given expert to examine the same individual, generally the request is preceded with this kind of a statement:

"Doctor, this individual is causing us some trouble. I frankly think he is a liar or he is grossly exaggerating, and I've got a lot of reasons for thinking that. We want to know objectively, scientifically, what you can find wrong. Not what he tells you now; we have heard all that, we have all that in the complaint; particularly not what he tells you after he has been talking to his lawyer, who might have told him what to tell you. We want to know only what you can find objectively."

Therefore, that physician bases his opinion on half a case. He not only has eliminated sympathy, he has also eliminated the subjective elements of the case, the symptoms. He brings only the findings based on objective signs into the court room.

In ordinary treatment of the patient the physician does not have these problems. He may assume that what the patient says hurts, really hurts, and that it is not something that has just been magnified into a hurt in his mind because of the automobile accident.

In the ordinary situation also the physician can approach his patient in the ordinary therapeutic manner, without worrying too much about how much weight he is to give this question of past medical history, or the question of unconscious sympathy.

In the forensic situation the problem of evaluation, of deliberation, becomes an all-important one. If there is no relation of the physician to either side, I think the physician can, on his own, without any instructions from the court, take the proper middle course. As soon as you set up this kind of artificial side relationship you are distorting to some extent. That distortion is, I think, reflected in many instances in the battle of experts in court.

That is why I would be willing to call the court-appointed physician an "impartial" medical expert, even though the other two might be equally impartial when called by a court rather than by the parties directly.

H. ALBERT YOUNG, Member of the Delaware Bar: Doctor Hadden, you gave us that illustration of Joe, who was involved in that accident, and I believe you stated he had a concussion of the brain. He suffered certain disability, and you stated he also had residual effects of post-traumatic pain syndrome.

You also mentioned something about coin of the realm and I got a certain impression from that, that either the injured party, or the lawyer representing the injured party, was more interested in the coin of the realm than he was in the recovery of that particular patient.

Now I want to ask you, are you of the opinion that a diagnosis of a post-traumatic pain syndrome, following a concussion of the brain and a brain injury, is not compensable, for which the lawyer should seek ultimate recovery?

DOCTOR HADDEN: I did not mean to create the impression that one should not be compensated for injuries. What I do wish to do is enter a plea for the person most intimately involved, the plaintiff, who is lost sight of in this conflict of which Doctor Polsky spoke. I feel that before the conflict is established by the engaging of counsel, that we, as physicians, ought to exert every effort for the recovery of the patient, the medical recovery, and postpone any involvement in the contest by getting the lawyer in the situation too early. It implies, "Look. You have a good case." You see? And as soon as that occurs then the individual begins to visualize secondary pecuniary gain, which may obstruct his recovery.

And that is why it is somewhat similar to the compensation of the G.I., for neuro-psychiatric disability. As long as he is going to be compensated it is very difficult to have him give up that compensation. So I feel that we ought to focus our attention on the fact that if real justice is to be done we ought, first of all, to try and obtain the highest degree of medical recovery of the individual. Then let the secondary phase be the compensation for those residual symptoms, for loss of time, and so on. Let us focus first on the medical recovery of the individual.

MR. YOUNG: Doctor, ruling out malingering, if you find that sort of condition, do you think the doctor ought to recognize that traumatic pain syndrome as a real injury and a real result, or residual to that accident?

DOCTOR HADDEN: Here, of course, we get into a very interesting situation. But what is real? For example, the symptom, every symptom of a neurotic, or the malingerer, is absolutely real. I think that the pains, all the complaints, of the neurotic are very real. The palpitation of the heart, that is real. The nausea, the vomiting, all of those symptoms are real.

Now many times I think a lawyer feels that they are just imagining those things. I am sure that most of you here have had some degree of stage fright. Was that short-

ness of breath real? Was your mouth really dry? And did your knees get kind of rubbery? And things got kind of hazy before your eyes? Or were you just imagining it? I have had stage fright, and those things are very real.

So all of the symptoms of the neurotic are real; they are not imaginary; they are produced by the emotion that is involved in the situation.

I don't know whether I have answered your question but they are real, certainly they are real.

CLEMENT C. WOOD: Doctor Hadden, do you have a feeling that traumatic neurosis occurs only in the anti-traumatic maladjustment?

DOCTOR HADDEN: Well, I do feel that as a matter of fact all of us have a certain amount of neurotic potential; that when we are injured that may be activated.

I am sure we know individuals who will sustain certain types of injuries and, even where others are responsible, not develop a disabling group of symptoms. And so I think it depends upon the adjustment of the individual prior to the injury. But I think all of us have some degree of potential under certain circumstances and may have neurotic symptoms following trauma.

DOCTOR H. T. MCGUIRE: I am from New Castle, where we usually have peace and tranquility. I find a little hostility welling up to Doctor Polsky's constant application of the family physician as a poor relation to the case, since it has been made plain here that we are dealing only with types who say, "Please don't tell me the facts; I have made up my mind."

It would seem to me that you, in the legal profession, are making a serious error in denying, and not accepting the knowledge and the information that the family physician or general practitioner, or the journalist, or whatever other opprobrium you may give him, has when you call out of the blue a fellow to make only an objective determination. Because that objectivity in illness is only in relation to about three to ten, that it shows up anyway.

So I am curious to know, because I have had this happen not too long ago, where I was in the position of the family physician, twenty-three years of relationship with an individual, and I had an expert — he was a Philadelphia expert, he wasn't far out of town, but he was an expert, and his fee was expert, I'm sure.

I again became a little hostile to the disparity because probably my hostility—well, I had more than he did because I knew more. But it seems to me that there is an inequity both to the plaintiff and to the defendant as well as to the court, and to all people who are attempting to make a determination.

So I would like to know now, Doctor Polksy being a teacher, I am sure he can use this method, or, as it is frequently called, methodology, with reckless abandon, but it seems to me to be inherent in his thinking because he said it three times. I would like to know just why one who has a Blackstonian background, or just came out of Harvard, why he makes that such a substantial part of his defense?

DOCTOR POLSKY: First of all, my apologies to all family physicians. I did not mean to disparage them as a group. The reasons I used them as examples, undoubtedly ill-advisedly, were these. There is a tendency to over-evaluate, in my judgment, the family physician's testimony in the court room. Generally the plaintiff's attorney — at least in Philadelphia and I assume that much the same thing takes place in Delaware — will stress to the jury the fact that Doctor "X," for the defense, may be an expert but he saw the patient only once. But Doctor Jones has been treating this family for thirty years, and brought this boy into the world, has known him through every illness.

Doctor Jones was also the first doctor to see him, and saw him every week thereafter for a period of many months. Doctor Jones's testimony is therefore the only reliable criterion. What the jurors must do in effect, the plaintiff's attorney tells them, is cancel out the examining experts, the one-shot fellows. One says one thing, one

the other; cancel them out. And you are left with that paragon of virtue, the family doctor, who can't go wrong because he has seen the individual so often. I have found this situation, which happens all too often, in examining transcripts in attempting to get teaching materials together.

Futhermore, the expert, qualified as an expert in a certain field, and dealing with a problem that is outside of his field will say, "I'm sorry, that is beyond my range of examination. I am an expert in," whatever his field is. Unless he is an internist, and even there he may draw a line. He may say, "I am not a chest man, I am a radiologist." He is generally well able to stand the test of cross-examination without any difficulty.

The fellow who gets into trouble most of the time — and I offer this simply on the basis of very limited experience in examining these transcripts, but will have more when we have this Institute actually functioning and we are examining transcripts in the thousands — the fellow who gets into trouble is the family physician, who is presumed by the court and by the jury and by everyone to be expert in all things.

Not all family physicians get into trouble; some of them acquit themselves extremely well; and some of them actually do impart more knowledge than the experts, to the jury, because they have a tendency to try to relate to the jury and to explain to the jury.

But in an appreciable number of instances where I think the course of justice goes off the rails, it goes off the rails because the family physician comes in thinking that simply because he is a physician, does have an M.D. degree, he will be able to cope with the lawyer on better than equal terms.

The lawyer, who has prepared himself by consulting experts and books on a very narrow area of medicine, can frequently make the family doctor look silly, when he should not look silly. His testimony is important, and if he had taken just a little bit of time, perhaps fifteen minutes of prepara-

tion, as compared to the attorney's five hours of preparation, he would be able to meet the cross-examination head on, and still get across his point to the jury.

Instead of that he either is discredited or he begins to backwater, and this action of backing water is worse than being discredited as far as I am concerned. For then he is ready to admit practically anything to get off the hook the cross-examiner has him on. The examiner throws something at him, "Couldn't this probably be due to something else, Doctor?" "Well, yes, I suppose it could be." He is anxious to get out of that court room now.

I think it is a fact that the general practitioner does create more problems than the expert in the court room. For whatever it is worth that has been my conclusion in examining the records.

HIRAM WARDER: I would like to address a question to Doctor Polksky on this line: I gather that the process that he has been outlining to us goes in more or less for determining the actual disabilities that have been suffered by this person.

We have been described here in America by some European psychiatrists as being compulsive neurotics, and Doctor Hadden said we are all potential neurotics. Be that as it may. During the last war, in psychosomatic medicine it was pretty well developed that among the medical profession, not only in the military service but also among civilians, a very high proportion of ailments is caused either directly or indirectly by emotional causes.

Now assuming that you have a plaintiff who is involved in an accident, and assuming that he develops these neuropsychiatric conditions which produce these very real symptoms referred to by Doctor Hadden, and which do disable this man; assuming that it is the desire also as a matter of public policy, and should be the desire of both professions to rehabilitate this man, don't you think that a defendant whose negligence causes this man to be injured should be required to compensate him for any disability he may have? even though it so happens that a large amount of that disability

can be pinned on to a neurosis where, in fact, the accident was the ultimate cause? Don't you think that is a just risk?

DOCTOR POLSKY: I haven't the slightest disagreement with you, and I hope that what I said did not give the impression to others that I was advocating stopping short with the findings, or resting only on objective results that the physician is able to obtain.

As a matter of fact I am strongly of the opinion that the traumatic neurosis is and properly should be compensable. The question is not whether the traumatic neurosis should be compensable, but whether something can be done to keep this from becoming a permanent psychiatric condition. There is this real problem of secondary gain.

The process of litigation is itself a traumatic factor, an additional traumatic factor, after physical trauma, and we have got to recognize it as such sooner. As a matter of fact perhaps the easiest way to sum this whole thing up is to paraphrase what a very eminent neurologist once said on the witness stand when he was asked whether all this didn't really amount to a greenback poultice that he wanted applied to the plaintiff.

The answer was, "Yes. As a matter of therapy, and as a physician, forgetting all about the law, simply as a physician, I would prescribe a greenback poultice for these reasons and to this degree. That if it is prescribed soon enough, and if it is prescribed in large enough amount, and the soonness has a relationship to the largeness, that is the sooner the lesser the amount needed, it will cure this individual."

"And if it is not, this individual will not be cured. And the longer the period of time that intervenes and the smaller the poultice that is applied, the more certain you are to wind up with something that is going to make this individual a cripple for the rest of his life."

We have a duty to mitigate damages, as lawyers, and part of that duty is to try to get these cases disposed of as quickly as possible. We can't eliminate the legal pro-

cess altogether, or keep it in limbo forever. This is one of the hazards of working with the kind of tools that we work with. We have got to subject individuals to that additional trauma. The problem is to keep that trauma as small as possible.

Now something like this New York project which results in speedy settlements, seems to me to be about all we can do right now, short of comparative negligence. If you add comparative negligence I think you have gotten still another technique for dealing with this kind of thing.

How far you go in comparative negligence in cutting down on the amount of the award because of the pre-existing neurosis, or neurotic pre-disposition, or because of the added trauma of the legal process, are all difficult problems to assay right now; but certainly comparative negligence would help. Much more important than comparative negligence is getting this kind of case disposed of quickly; quickness is the important thing here.

HERBERT L. COBIN: I am interested, as a practicing attorney, in these civil negligence cases, and I would like to address this to any member of the panel: Isn't it true that the medico-legal problems really encompass a much wider field than the last few minutes of discussion on negligence cases might indicate?

For example, most states now have family courts, juvenile courts, where domestic problems arise, your divorce problems. As Judge Biggs pointed out, the criminal problems. Isn't that a very wide, fertile field, the surface of which has hardly been scratched, for the relationship and the close association needed between lawyers and physicians in determining in the interest of society how those problems should be handled?

In the Attorney General's office I observe the great number of juvenile and family cases that are brought, before they get up to the higher courts, where certainly the fields of law and medicine are not working together closely enough to do a job that ought to be done. I am just wondering if

the panel speakers might care to comment on it.

JUDGE BIGGS: I tried to touch that a little bit in the limited time that was at our disposal. In my mind that is the \$64,000 problem.

The handling of negligence cases is, of course, a very substantial part of your problem, as Doctor Hadden and Doctor Polksky have pointed out, and as I tried to do, too. But, of course, it seems to me that there will have to be some long-range solution worked out for the problems which lie in the field of what you might call general citizenship of the individual.

What makes a juvenile delinquent? What about family relations? And do we need additional statutes? I am convinced that we do. I don't mean to imply that passing a statute is a cure-all, but there must be some machinery which the lawyer and the doctor, between them, probably will have to supply. Unfortunately, to try to do that by way of a brief speech is to my mind impossible. One would have to spend many hours of lecturing; it is a whole course, a course over years, which would have to be demonstrated.

But the need, I think, is becoming acute, much more acute than it was, for example, when I came to the Bar in 1922. The problem of juvenile delinquency then — if it was not non-existent — was at least attracting no popular attention. Perhaps the automobile has contributed not only in the field of personal injury but also in the field of injury to personality. That is to say, it is very easy for a boy to go out on a joy ride these days; in my day it was not.

These problems, I think, are such that the medical profession and the legal profession of necessity must work together. And I don't believe the lawyer can possibly solve these problems without the aid of a physician. I think the correlation between the two professions has to be so close that I would expect to see within twenty years almost an emergent of the functioning of the two.

So that automatically one might have even at grade school level some sort of ex-

amination made, for example, by Rorschach tests given to a class generally, where you could know your problem people and begin to treat them at that level. Of course, that presents a very serious question of possible interference with personal liberty that would have to be handled. That is the legal side of it.

I think that most of the material in the forthcoming years whereby simplification of our problems of the law are concerned must be literally supplied by the physicians. I think it is absolutely essential that both some law be taught in medical schools and a good deal of medicine be taught in law schools. I think it is a very long-term problem and, of course, I think today of necessity we have merely touched the surface.

THE CHAIRMAN: Thank you, Judge Biggs.

We have no further time in this morning session.

I wish to thank the three speakers, and thank you all for your attention.

(Whereupon the meeting was adjourned for the luncheon recess.)

* * *

Tuberculosis death rates generally are high in the large cities. Cities of 100,000 population and over have a tuberculosis death rate approximately 80 per cent higher than that of the remainder of the country. Robert J. Anderson, M.D., Pub. Health Rep., Feb., 1956.

* * *

It would appear that there are well authenticated instances where malnutrition was the only probable cause of a rise in tuberculosis morbidity and mortality, though in most instances it is one of several associated possible causes. There are also indications that malnutrition becomes operative as an etiological factor in tuberculosis only when a critical level is reached. On the other hand, it is recognized that optimum nutrition gives no absolute protection against tuberculosis, if other circumstances are unfavorable. Alton S. Pope, M.D., and John E. Gordon, M.D. Am. J. Med. Sciences, Sept., 1955.

Mortality is not the real yardstick to measure the importance or judge the control of a disease. Even if there were drugs capable of preventing the sudden deaths resulting from hypertension and arteriosclerosis, these conditions would remain a tremendous medical and social problem. Similarly, adults do not commonly die of mental disorders, arthritis, or peptic ulcers. Yet, no one would claim that these afflictions have been conquered. Neither has tuberculosis been conquered. Instead, the forces which have been at work during the past century have slowly converted it from a killing to a chronic disease. Rene J. Dubos, Ph.D., Nat. Tuberc. A. Tr., May, 1954.

Supplying necessary rehabilitative services emphasizes more than any other instance the combined role of the physician, hospital, and health department in meeting community needs. L. E. Burney, M.D., Calif. Med., Jan., 1956.

* * *

It would seem to be elementary that, if a patient with an acute lower respiratory infection were ill enough to require hospitalization, an initial diagnostic chest X-ray would be mandatory, and that for pneumonias, additional progress films would be in order. C. Wesley Eisele, M.D., Vergil N. Slee, M.D., and Robert G. Hoffmann, Ph.D., Ann. Int. Med., Jan., 1956.

* * *

Despite a gratifying decline in the death rate, the tuberculosis problem in this country will not approach acceptable solution until the morbidity rate demonstrates a corresponding decline. Over the last five years, deaths from tuberculosis have declined between 15 and 20 per cent each year. The morbidity rate, however, has declined only three to four per cent per year over the same period of time. At this rate, more than a quarter century will be required to equal the same per cent reduction in morbidity that has been achieved in mortality in the past five years alone. An. Rep. Div. Special Health Services, U. S. Department of Health, Education, and Welfare, Washington, D. C. (1954-1955)

+ Editorials +

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NORMAN L. CANNON, M. D. Assoc. Editor
1208 Delaware Avenue

M. A. TARUMIANZ, M. D. Assoc. & Man. Ed.
Farnhurst, Del.

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THE ART AND SCIENCE OF MEDICINE

Much has been written about the art and the science of medicine as if they were an incompatible couple heading medicine for the divorce courts. Those who hail the art of medicine as paramount tend to bolster their argument with derisive examples where the science seemingly has failed. Those on the other side who have no room for art in their scientific approach speak deprecatingly of pill pushers, injection specialists and the laying on of hands. The argument is reminiscent of the debates among the sociologists a generation ago concerning heredity versus environment as the sole determinant to behavior, an argument which resolved itself into an appreciation that both operated inseparably to fashion the end results. Whether art and science can resolve themselves similarly depends upon a number of things.

Science is derived from the Latin "scientia" meaning knowledge. Art is also from

the latin "ars" meaning skill. Some usage has transposed one into the other at various times. And in the application of knowledge certainly skill becomes an important part of the whole. Medical science is certainly an applied science which utilizes a number of basic sciences for its support. As defined, a science, which is the study of a body of facts systematically arranged and showing the operation of general laws, would hardly be useful unless applied with skill or art. A marriage between science and art would seem inevitable. Then whence the dichotomy in thinking, wherefore the schizoid attitude, the divisive arguments of art versus science in the practice of medicine.

Much of the difficulty seems to stem from the rapid advances made in the body of medical knowledge concerning the facts of disease and means of treatment arising from basic research which has moved medicine so rapidly in the past fifty years and seems to be gaining speed at an incredible rate in this age of antimicrobial drugs, radio-isotopes and ataractics. Medicine has come a long way from purgatives, emetics, stomachics and the rare specifics of our grandfather's day. The diagnostic assists to medical practice have taken over a tremendous area of hitherto uncertain diagnostic problems to such an extent that "Exploratory Laparotomy" is considered a dirty word by our Hospital Tissue Committees and an "error in diagnosis" brings the trembling surgeon abjectly to his knees in order to explain how this mistake came to be. Seriously speaking, however, the laboratory and the X-ray departments have added terrifically to what we can find out about a patient over and above the simple techniques of palpation, percussion and auscultation. The temptation to depend and rely upon them has been irresistible since their accuracy so far exceeds the fallible five senses with which we have been endowed. This dependence on objective techniques has further aided the decline in the use of these senses as has the automobile reduced the number of pedestrians in one way or another.

What does it matter if breath sounds are absent, when a chest x-ray will show the

exact area of pulmonary consolidation? What does the character of the sputum mean when the patient's pneumonia will respond to penicillin without even typing the pneumococcus? The science, the knowledge of disease and drugs, the use of diagnostic and therapeutic techniques in all branches of medicine and surgery has singlehandedly reduced mortality, morbidity, maternal and infant mortality and increased life span so much in the past half century that a catalogue of serious and as yet incurable diseases seems brief today when compared to those one would have had to encounter in 1900. These changes in the spectrum of prevalent and challenging disease has been due to the expanding science of medicine. The mycobacterium of tuberculosis is killed by the streptomycin and the patient benefits without art. The gonococcus is killed by penicillin no matter who administers the drug, without art. The list of examples is long and the conclusion is irresistible. The art of medicine declines in importance, decreases in its scope as the science of medicine increases its ability to cure disease by the direct action of drugs and techniques upon the disease itself. The patient is merely the accidental host for the disease whose treatment is predicated upon a knowledge of the action of the disease upon the patient in terms of the nature of the disease itself. It matters little who administers the penicillin or the poliomyelitis vaccine, or removes the appendix or excises the tumor as long as these things are done at the proper time in the standard manner for the proper indications and with sound judgment. The diseased patient will get well despite the doctor if given the scientifically designated treatment. He doesn't have to like the doctor to get well. No bedside manner is needed to cure meningitis when the laboratory reports a tetracycline sensitive organism in the spinal fluid.

Is the art of medicine then to be left only for those patients whose diseases are as yet incurable? Is the art of medicine a shrinking, ever contracting area of practice destined to be eventually extinguished by the avalanche of scientific knowledge? Such fate would seem on the surface to be inevitable and logically inescapable. Yet

the derivation of the word "Art" comes from the word "skill" and without skill the practice of medicine would hardly have achieved the marvels of today's triumphant victories over disease. The practice of surgery without skill would be unthinkable; the practice of medicine without judgment (a form of non-surgical skill) would lead to indiscriminate testing and drug administration. The consequences on both these practices would be catastrophic to patients and the medical profession alike.

The art of medicine is the handmaiden of the science. The two are inseparable. The disease is not operating in a vacuum but within or upon a patient and the patient is a person who must be treated as a whole. The medical judgment gained from experience, from preceptors, from honest error and from creative thinking about the practice of medicine represents an intangible skill, an art of healing which is to be integrated with the body of knowledge systematically arranged and showing the operation of general laws known as the science of medicine.

The art of medicine is that intangible quality which affects the entire practice of medicine from the moment the patient and the doctor come into contact. It applies to the taking of the patient's history, to the physical examination, the selection of special laboratory tests and to their interpretation in the light of all the accumulated knowledge about the patient. The seemingly casual small talk with the patient is part of this art in providing the doctor with additional insight concerning the character of the patient and his background. All of this and more is necessary for treating the patient as a person rather than as a case of glomerulonephritis or leukemia.

So far, the sociologists and the psychologists have not been able to provide us with a body of facts and laws by which this phase of medical practice can be learned from texts. This is not the sort of information which has been catalogued for the guidance of every medical student in a handbook. It must be learned by experience and observation and the teachers are often the patients themselves if only we

know when and where to look for guidance. The clues for learning the art of medicine often come in the unlikeliest places and the teachers are often unconscious that they are imparting some bit of their art to us. But the realization that there is more to the practice of medicine than the application of text book knowledge and the laboratory screening of diseases for diagnosis more than the administration of appropriate drugs or the execution of the indicated surgery will elevate the art in medicine to a constant companionship with science which, after all, is still the *sina qua non* in the treatment of people with physical and mental disease.

ANNUAL MEETING

The Annual Meeting of the Medical Society of Delaware will be held at the Hotel Henlopen in Rehoboth, Delaware on September 13 and 14. The arrangements for this year represent some slight variations from previous years. In the first place the meeting will be concentrated in an evening session Thursday night, the 13th, followed by an all day session on Friday the 14th. The fact that the meeting is in Rehoboth means that we shall meet a month earlier than usual and it is expected that a good turnout of Physicians will attend all the sessions. Holding the meeting on Thursday and Friday, rather than the customary beginning of the week dates, offers to all the doctors the opportunity of combining the session with a weekend of relaxation in Rehoboth. It is hoped that this bait will attract a large number of physicians and their families for the entire meeting. These dates are just past the end of the "season" and the weather should be fine. Rehoboth has many resort attractions in addition to its beaches. Please plan ahead and mark September 13 and 14 on your calendar as a must for Rehoboth. Make a weekend of it while you are at it. An excellent scientific program has been planned and the time spent at the meetings, the exhibits and in Rehoboth will be well worth your while.

SCIENCE FAIR

Delaware was well represented at the National Science Fair held last May in Oklahoma City by the two top winners of the Delaware State Science Fair, Robert Armsby and Whitney Adams. These two young men from Sanford Preparatory School and Alexis I. Du Pont School, respectively took their exhibits, after winning here in competition with 686 entrants, into the larger and stiffer competition of the National Science Fair and did very well. Of particular interest to the Physicians of Delaware, is the fact that Robert Armsby with an exhibit titled "A Respiration Calorimeter" won third prize at the National Fair and was runner-up in the special competition held by the AMA for the best exhibit in the Medical field, the winner of which was to be awarded a trip to Chicago where he would exhibit at the AMA Convention in June.

It may be coincidence, but the fact is inescapable, that the first time Delaware has had a high honor on the National level in a biological subject four Delaware Doctors participated in the judging at the Delaware Science Fair held in last April at Tower Hill School. These were Doctor Jack Alden, Doctor Allen Fleming, Doctor Otto Pollak and Doctor Karl Russell. They spent a busy and fruitful evening going over the many exhibits in conjunction with more than twenty other judges evaluating the work and interviewing the exhibitors before they came to their final decisions which meant so much to these many fine young boys and girls.

The work of the Delaware State Science Fair is important to the development of scientific brains for the future of our country. We Doctors have a real part to play in this effort and this program represents a fertile and challenging incentive to us as doctors for next year and the years to come. We would like to see more and more doctors get closer to the work of the Science Fair through their communities up and down the State and also, should the occasion arise, serve as a judge or on a committee so that the work can benefit from your medical background. The competition

for brain power is keen in this country and throughout the world. Medicine needs the best brains it can attract for the myriad of as yet unsolved problems still facing us. By stimulating interest and directing activity during these formative years among the youth we shall be providing a hopeful reservoir upon which the future generations may draw.

BOOK REVIEWS

PATHOLOGY FOR THE SURGEON. By William Boyd, M.D., F.R.C.S., former Professor of Pathology, University of Manitoba, University of Toronto, University of British Columbia. William B. Sanders Co., Philadelphia & London, 1955.

As stated by the author in his preface, this book has been written primarily for the "graduate rather than undergraduate, the surgeon rather than the pathologist, the young rather than the old, in other words the interne or the resident who has to refresh his memory of pathology for examinations of the specialty boards—." Dr. Boyd has rewritten his textbook in a rather unique manner so that it is essentially a comprehensive and concise review of pathology from a surgeon's standpoint rather than a reference text for those primarily interested in pathology.

It is an up-to-date, modern textbook of pathology, which is written in a readable manner which combines the clinical aspects of surgery with the underlying pathology to an exceptional degree.

Its arrangement and organization is excellent and the preliminary outline or classification heading each chapter is of great benefit to anyone endeavoring to glean the essentials of the context of the subject in question.

For anyone interested in surgery and the basic pathology pertaining to the various aspects of it, this textbook is invaluable. The material covered in this book is not only comprehensive but unusually concise and well organized and clarifies many complex aspects of the subjects discussed to a degree seldom seen in any recent textbook. The chapter on the general pathology of tumors with particular reference to the car-

cinogens and the radiomimetic chemo-therapeutic agents is most illuminating and fundamental. It supplies the post-graduate student and the practicing surgeon with a readily understandable, comprehensive epitome of the whole approach to the modern attack on the problem of cancer.

The only criticism which one might make regarding this volume is that, in its treatment of certain subjects, e.g. branchiogenic cysts and the thyroid gland, it is too concise and too comprehensive to be entirely clear to someone not thoroughly familiar with the subject in hand.

This volume is of value, as has been stated, chiefly to surgeons or would-be surgeons, inasmuch as the clinical aspect of disease is emphasized to a greater extent than the histo-pathology. With its excellent index and references, it will be indispensable in the armamentarium of the busy, practicing surgeon as well as to the post-graduate student during his course of hospital training, and it should be equally as valuable in bringing the specialized pathologist in closer contact with the clinical aspects of surgery in general.

Its scope is as amazing as it is limitless, and one can scarcely begin the perusal of this volume without feeling compelled to continue on to the very end of this masterpiece or compendium of academic and practical surgery. This work might, perhaps, be disappointing to those who are in a highly specialized and limited field of either surgery or pathology.

THERAPY OF FUNGUS DISEASES. An International Symposium. Edited by Thomas H. Sternberg, M.D., Professor of Medicine (Dermatology) and Assistant Dean for Post-graduate Medical Education, and Victor D. Newcomer, M.D., Associate Professor of Medicine (Dermatology), University of California, at Los Angeles. Cloth. \$7.50. Pp. 337, with illustrations. Little, Brown & Company, 34 Beacon St., Boston 6; J. & A. Churchill Ltd., 104 Gloucester Pl., Postman Sq., London W.1, England, 1955.

This volume by 83 contributors consists of 55 papers which were presented at a symposium on fungus infections presented June 23 to 25, 1955, under the auspices of the Division of Dermatology, Department of Medicine, School of Medicine and Medical Extension, University Extension, University

of California at Los Angeles. It was made possible by the financial assistance of the Squibb Institute for Medical Research.

The collected papers are an up-to-date review of laboratory and clinical research on superficial and deep mycoses. They are intended only for those interested in mycology in general or in a specific problem associated with a particular fungus. An international point of view is presented by a discussion of fungus diseases in India, France, Argentina, Brazil, Mexico, The Philippines, and The Ukraine. Though some of the articles are clinical, many are technical laboratory studies.

Of the 55 papers presented, 16 are concerned with the chemistry, experimental background, and clinical activity of Nystatin. This antibiotic has been shown to be quite effective in the treatment of moniliasis, and shows promise in sporotrichosis and coccidioidomycosis. To the reviewer is knowledge, this volume is the most complete summary of the literature on Nystatin that has been assembled to this time.

TID BITS

Vague and insignificant forms of speech, and abuse of language, have so long passed for mysteries of science; and hard or misapplied words with little or no meaning have, by prescription, such a right to be mistaken for deep learning and height of speculation, that it will not be easy to persuade either those who speak or those who hear them, that they are but the covers of ignorance and hindrance or true knowledge.

(JOHN LOCKE)

One cannot but wonder at this constantly recurring phrase "getting something for nothing" as if it were the peculiar and perverse ambition of disturbers of society. Except for our animal outfit, practically all we have is handed to us gratis. Can the most complacent reactionary flatter himself that he invented the art of writing or the printing press, or discovered his religious, economic, and moral convictions, or any of the devices which supply him with meat and raiment or any of the sources of such pleasure as he may derive from literature or the fine arts? In short, civili-

zation is little else than getting something for nothing.

(JAMES HARVEY ROBINSON)

A well chosen anthology (of verse) is a complete dispensary of medicine for the more common mental disorders, and may be used as much for prevention as cure.

(ROBERT GRAVES)

That we should practice what we preach is generally admitted; but anyone who preaches what he and his hearers practice must incur the gravest moral disapprobation.

(LOGAN PEARSALL SMITH)

People who stay healthy will be those who realize that there is no escape from conflict. Where there is no conflict, there is death.

(EDUARD C. LINDEMANN)

All human history reveals that transcendental metaphysics is not only futile but dangerous. Those who have foisted, frequently by not too honest means, their unsupported speculations upon the naive and gullible as truths have served to retard man's self-realization more than any other misfortune that has ever befallen him. History also reveals that man does not need any brand of transcendental metaphysics — his lasting contentments and achievements he has found wholly within the frame of reference that takes things as they are in the here and now. No pattern of living is written in the stars; each may be tried and esteemed according to the individuals as a reasoned compromise. No value can be capitalized: all values are fluxions in vital dynamics. No supernal power can aid him: he must find within himself the creative vision, the courage and the will for his fulfillment . . . Man does not need a machine to manufacture happiness, or any oracle to tell him where to find it; it is a by-product of life needing only to be separated from the dross of want and pain. When the scales weigh down beneath the latter, his self-reliance will not fail him, he will fall back on that most elemental of animal virtues — courage. A man can lose his God but he cannot lose himself.

(from MAN AND HIS GODS
by HOMER W. SMITH)

Science is a way of life which can only flourish when men are free to have faith. A faith which we follow upon orders from outside is no faith, and a community which puts its dependence upon such a pseudo-faith is ultimately bound to ruin itself because of the paralysis which the lack of a healthily growing science imposes upon it.

(NORBERT WEINER—*The Human Use of Human Beings*)

"NOTES ON AN ATTACK OF CORONARY ARTERY DISEASE"

During my first sixty years, I think it might be fairly safe to say, I enjoyed good health. There were a few illnesses, but none of these were of the variety that leaves a residuum; I prided myself on the ability to work six and a half days a week, and the hours of work were long. It has always seemed to me that involvement in interesting problems is a safeguard of health because it counteracts any tendency to subjectivity.

In 1940, in anticipation of our entering World War II, my activities were stepped up by association in Washington with the National Research Council and particularly with the Chemical Warfare Service. During the new few years they were also very considerably increased in New Haven, with teaching and service responsibilities made heavy by a reduction in the staff personnel and the assumption of other duties by those members that were left to carry on. One has little realization of fatigue under such circumstances, in a time like that.

Be that as it may, I was undoubtedly fatigued, and with the end of the academic year there were other responsibilities, associated with the university, that deprived me of a good deal of rest over the week prior to my acute illness. I distinctly remember leaving the Commencement very tired and very hungry, and wondering whether it would be more advisable to get something to eat or take a nap — finally deciding on the latter. It was a hot June day, and after sleeping for an hour or so, I woke up with an acute precordial pain. This was annoying, but I put a hot pad on my chest, phoned and went home. My wife

became worried and called in my physician, who insisted that I go to the hospital. By the time I got there I felt perfectly well and wondered whether the pain was actually due to interference with coronary circulation or was one of the myalgic affairs that I have had in many other regions over the years.

A few days later the electrocardiogram apparently satisfied the physicians that it was a coronary, and so I was given strict orders to discontinue my ramblings around the room, smoking and even feeding myself.

Then the story became a little more clear, for I slept most of the first week, terribly fatigued undoubtedly, and glad for the rest. The amount of food I ate was very small, and with absolutely no activity, not even raising my arm to shave or to feed myself, I slowly began to change from a colloidal to a noncolloidal mass. By the end of three weeks I felt very much like a sack of salt water held up by the apex.

In another three weeks, when they began to let me put a foot out of the bed, it seemed almost impossible for it ever again to assume its original purpose. But I slowly regained my strength, very definitely convinced that I had never had a coronary, very definitely convinced that I had been very greatly fatigued but that some kind of physiotherapy might have been not only permissible but also desirable, to avoid the complete skeletal debilitation that followed a protracted inactivity. It took several months to overcome this weakness and the fear that developed with every sort of evidence of dyspnea; but as time went on and this shortness of breath did not develop, except from overexertion, I had greater and greater confidence and became increasingly active. I do not believe that I suffered any great psychological hurt.

Five years have now elapsed, and while I am rarely conscious of any fear of recurrence, I think I do tend to avoid fatigue—more perhaps when I am not active than when I am working hard.

(M. C. WINTERNITZ, M.D. from
When Doctors are Patients)

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*Fishberg, A. M.: Hypertension
and Nephritis, ed. 5, Philadelphia,
Lea & Febiger, 1954, pp. 177-178.

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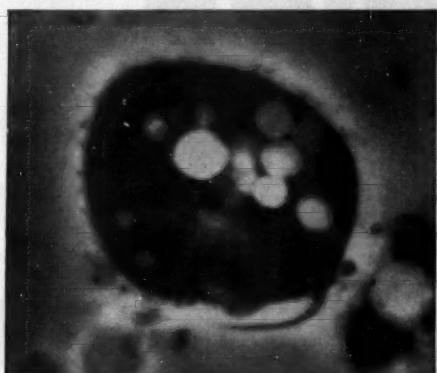
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1. Davis, C. H.: Am. J. Obst. & Gynec. 68:559 (Aug.) 1954.
2. Davis, C. H.: West. J. Surg. 63:53 (Feb.) 1955.
3. Davis, C. H.: J.A.M.A. 157:126 (Jan. 8) 1955.

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1. Seifter, J., et al.: To be published. 2. Fazekas, J.F., et al.: M. Ann. District of Columbia 25:67 (Feb.) 1956. 3. Mitchell, E.H.: J.A.M.A. In press.



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*Moyer, J. H., and Hughes, W. M.:
J. Chron. Dis. 2:678, 1955.

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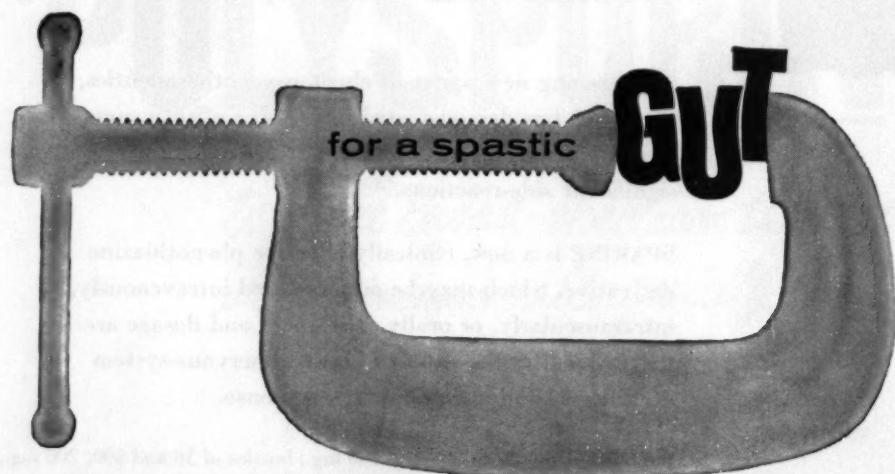
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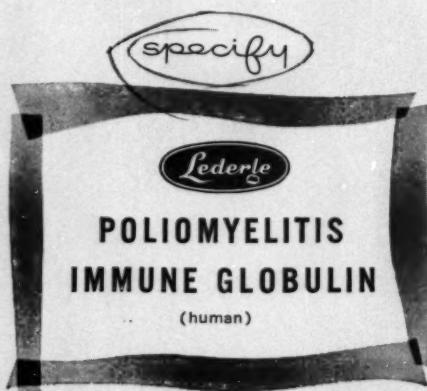
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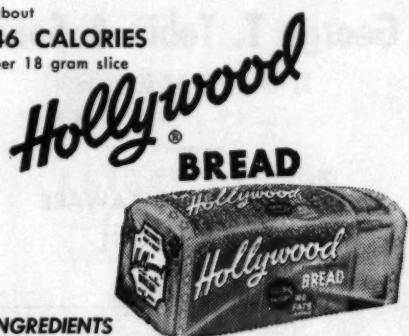
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